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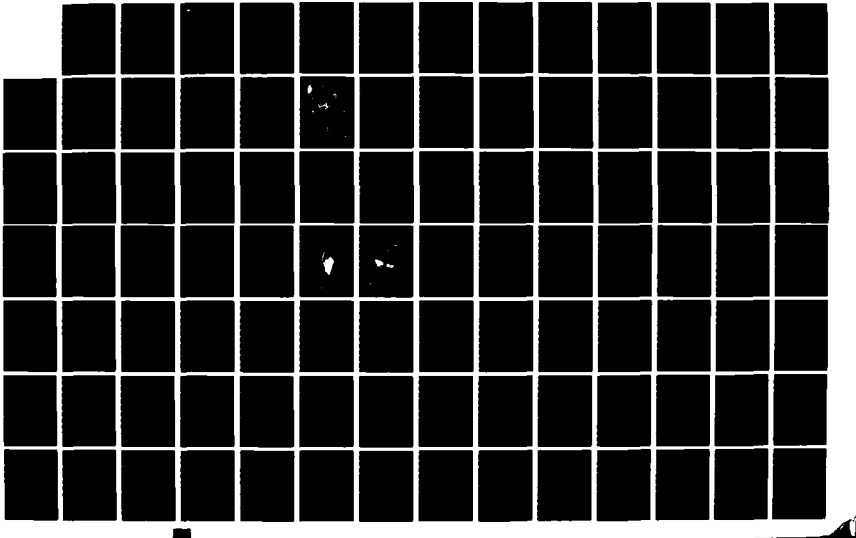

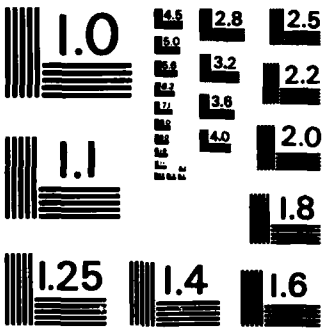

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Final
Report No. 33
February 25, 1985

An Archeological Overview and Management Plan for the Lexington-Blue Grass Depot Activity, Fayette, Bourbon, and Madison Counties, Kentucky

Under Contract CX-5000-3-0771
with the

National Park Service
U.S. Department of Interior
Atlanta, Georgia 30303

for the
U.S. Army Materiel Development and
Readiness Command

by

Barbara Stafford, Harold Hassen
Edward Jelks, and Keith L. Barr
Center for American Archeology
Kampsville, Illinois 62053

Prepared under the Supervision of

Ruthann Knudson

Ruthann Knudson, WCC Principal Investigator

Woodward-Clyde Consultants
One Walnut Creek Center
100 Pringle Avenue, Walnut Creek, CA 94596

United States Department of the Interior

NATIONAL PARK SERVICE
SOUTHEAST REGIONAL OFFICE
75 Spring Street, S.W.
Atlanta, Georgia 30303

IN REPLY REFER TO

S7221(SER-PA)

SEP 11 '85

Mr. Cundiff
Cameron Station
Building 5
Alexandria, Virginia 22314

Dear Mr. Cundiff:

Enclosed is one copy each of the following reports:

(See enclosed list)

The reports were produced under the terms of Contract No. CX 5000-3-0771 between the National Park Service and the U.S. Army, with funding provided by DARCOM. For information regarding these reports contact Dr. Mark R. Barnes (404) 221-2654.

Sincerely,

John E. Ehrenhard
Chief, Archeological
Services Division

Enclosures

The appended resource locational data in these reports should be deleted per Dr. Mark R. Barnes.

Final DARCOM Reports

Report No. 23, An Archeological Overview and Management Plan for the Joliet Army Ammunition Plant, Will County, Illinois, by the Center for American Archeology, and Woodward-Clyde Consultants.

Report No. 24, An Archeological Overview and Management Plan for the Rock Island Arsenal, Rock Island County, Illinois, by the Center for American Archeology, and Woodward-Clyde Consultants.

Report No. 25, An Archeological Overview and Management Plan for the Volunteer Army Ammunition Plant, Hamilton County, Tennessee, by Memphis State University, and Woodward-Clyde Consultants.

Report No. 33, An Archeological Overview and Management Plan for the Lexington-Blue Grass Depot Activity, Fayette, Bourbon, and Madison Counties, Kentucky, by the Center for American Archeology and Woodward-Clyde Consultants.

Report No. 35, An Archeological Overview and Management Plan for the St. Louis Area Support Center, Madison County, Illinois, by the Center for American Archeology, and Woodward-Clyde Consultants.

Report No. 36, An Archeological Overview and Management Plan for the St. Louis Army Ammunition Plant, St. Louis County, Missouri, by the Center for American Archeology, and Woodward-Clyde Consultants.

Report No. 38, An Archeological Overview and Management Plan for the Redstone Arsenal, Madison County, Alabama, by Memphis State University, and Woodward-Clyde Consultants.

Report No. 39, An Archeological Overview and Management Plan for the Lima Army Tank Plant, Allen County, Ohio, by the Center for American Archeology, and Woodward-Clyde Consultants.

Report No. 40, An Archeological Overview and Management Plan for the Detroit Arsenal, the Pontiac Storage Facility, and the Keweenaw Field Station, Macomb, Oakland, and Houghton Counties, Michigan, by the Center for American Archeology, and Woodward-Clyde Consultants.

Report No. 28, An Archeological Overview and Management Plan for the Pine Bluff Arsenal, Jefferson County, Arkansas, by Heartfield, Price, and Greene, Inc., and Woodward-Clyde Consultants. (Corrected Copy)

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Woodward-Clyde Consultants
One Walnut Creek Center
100 Pringle Avenue
Walnut Creek, CA 94596

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16. Abstract (Limit: 200 words)

As part of a general program in the Lexington-Blue Grass Depot Activity's historic preservation planning, this report documents the lack of any recorded archeological resources on the facility, and the presence of 135 potential historic sites within the facility's boundaries. No archeological investigations have been conducted on the Depot Activity. In compliance with Army Regulation 420-40, it is recommended that a reconnaissance survey of undisturbed facility lands be initiated. In addition, archival and oral historical research are recommended to further document the 135 potential historic resources. A field check may be necessary on those sites having high research potential, and those evaluated as unique and/or significant in terms of the National Registor of Historic Places criteria. Archeological inventory data, together with historic architectural information, would then serve to help develop a facility historic preservation plan.

17. Document Analysis a. Descriptors
Archeological Management
Army Installation Management
Environmental Assessment

reference: Thesaurus of Engineering and Scientific Terms

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MANAGEMENT SUMMARY

The Lexington-Blue Grass Depot Activity is a facility of the U. S. Department of the Army DARCOM (Materiel Development and Readiness Command), with responsibilities for the management of any prehistoric and historic archeological resources that are retained within installation lands. This report summarizes the archeological resources presently identified on the facility, the culture history of the area that provides a context for the interpretation and evaluation of those resources, an assessment of the total archeological research base likely to be found on installation lands, and recommendations for the future management of those resources within the overall context of DARCOM missions and public responsibilities.

Compliance with the National Historic Preservation Act, Archeological and Historic Preservation Act, 36 CFR 800, and Army Regulation 420-40, requires the identification, evaluation, and where feasible, affirmative management of significant archeological resources. These regulations also require that federal undertakings (e.g., new construction, new leases, or lease renewals of public lands) take into consideration the effects of their proposed activities on these significant materials.

No archeological research has been conducted on the Lexington-Blue Grass Depot Activity. It is recommended that a comprehensive records search be undertaken to compile data needed to evaluate the 135 potential historic sites and a reconnaissance level survey of currently undisturbed facility lands be completed. This work would include archival research, field verification of the integrity of all the potential historic sites, field survey to locate any remaining sites, National Register evaluation,

SHPO consultation, and report preparation. Such investigation needs to be coordinated with state preservation planning processes, and should provide information that supports the conduct of a cultural resource management program appropriate to the protection of heritage values in the context of a military installation.

PREPARERS AND QUALIFICATIONS

Barbara D. Stafford is the principal author of this report. She holds a summa cum laude BS in Sociology (minors in anthropology and psychology), and an MA and a PhD in Anthropology. She has participated in archeological investigations across the United States and in Europe. Presently, she is a Research Archeologist with the Center for American Archeology, serving as a Principal Investigator.

Harold Hassen is a contributing author and Project Director. He holds a BA, an MA, and a PhD in Anthropology. He has participated in archeological investigations in the midwestern U. S., and currently holds the position of Research Archeologist with the Center for American Archeology, serving as Principal Investigator. He has been directing projects in cultural resource management for the past five years, and is certified by the Society of Professional Archeologists in field and archival research.

Edward B. Jelks is a contributing author. He holds a BA in English and a MA and PhD in Anthropology. He has participated in extensive archeological investigations throughout the U. S., emphasizing historic resources. He is certified by the Society of Professional Archeologists in field, collections, and archival research; administration; museology; teaching; and historical archeology. He has held administrative positions since 1951 with federal, state, and university facilities. Currently, he holds the position of Professor at Illinois State University.

Keith L. Barr is a contributing author. He holds a BS in History and an MS in archeology with an emphasis in historical archeology. He has

participated in archeological investigations in the midwestern U. S. and is currently affiliated with the Midwestern Archeological Research Center at Illinois State University.

ACKNOWLEDGEMENTS

A number of people have been extremely generous with their time and effort in the preparation of this management report. Mr. Gary Metcalf at the Lexington-Blue Graas Depot Activity provided information regarding the facility and ground disturbance areas. Mr. James Batura and Ms. Marjorie Schroeder of the Center for American Archeology were responsible for accumulation of the data necessary for the interpretation of the prehistoric and natural resources. Ms. Frieda Vereckeen-Odell of the Center for American Archeology prepared the figures. Ms. Beverly Sexaur and Ms. Ruth Sperry typed the draft manuscript.

Additional thanks go to Dr. Mark R. Barnes, NPS, SERO; and Mr. David L. Morgan, Kentucky SHPO, and his staff for their review of the first draft; and Ms. Susan Cleveland, Contracting Officer, NPS, SERO.

Final report production, including graphics, has been completed by Woodward-Clyde Consultants, with editorial review (particularly of management recommendations) and text preparation completed by Dr. Ruthann Knudson and Ms. Betty Schmucker.

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FOREWORD

As a federal agency with large public land holdings, the U. S. Army is responsible for the stewardship of a variety of natural and cultural resources that are part of its installations' landscapes. The Army's Materiel Development and Readiness Command (DARCOM) presently manages a nationwide network of 65 installations and 101 subinstallations and separate units, which range in size from one acre to over one million acres. As part of its programs of environmental and property management, DARCOM has requested that the U. S. Department of the Interior's National Park Service provide technical guidance to develop programs for managing installation cultural resources.

NPS is thus conducting the DARCOM Historical/Archeological Survey (DHAS), which has two major disciplinary elements. The architectural review and planning function is being directed by the Service's Historic American Buildings Survey (HABS), while the prehistoric and historic archeological resource assessment and planning function is the responsibility of the Service's Interagency Resource Division (IRD). IRD has contracted with Woodward-Clyde Consultants (WCC) for the development of guidelines for the DARCOM archeological management planning effort, and for the completion of over 40 overviews and plans throughout the United States. WCC has in turn subcontracted the technical studies to several regional subcontractors, with final editorial review of reports and preparation of text and illustrations handled by WCC.

This overview and recommended management plan for the archeological resources of the Lexington-Blue Grass Depot Activity was prepared by the

Center for American Archeology, Kampsville, Illinois, under subcontract to WCC. It follows the guidance of "A Work Plan for the Development of Archeological Overviews and Management Plans for Selected U. S. Department of the Army DARCOM Facilities," prepared by Ruthann Knudson, David J. Fee, and Steven E. James as Report No. 1 under the WCC DARCOM contract. A complete list of DHAS project reports is available from the National Park Service, Washington, DC.

The DHAS program marks a significant threshold in American cultural resource management. It provides guidance that is nationally applicable, is appropriately directed to meeting DARCOM resource management needs within the context of the Army's military mission, and is developed in complement to state and regional Resource Protection Planning Process (the RP3 process, through State Historic Preservation Offices). All of us participating in this effort, particularly in the development of this report, are pleased to have had this opportunity. Woodward-Clyde Consultants appreciates the technical and contractual guidance provided by the National Park Service in this effort, from the Atlanta and Washington DC offices and also from other specialists in NPS regional offices in Philadelphia, Denver, and San Francisco.

Woodward-Clyde Consultants — Ruthann Knudson

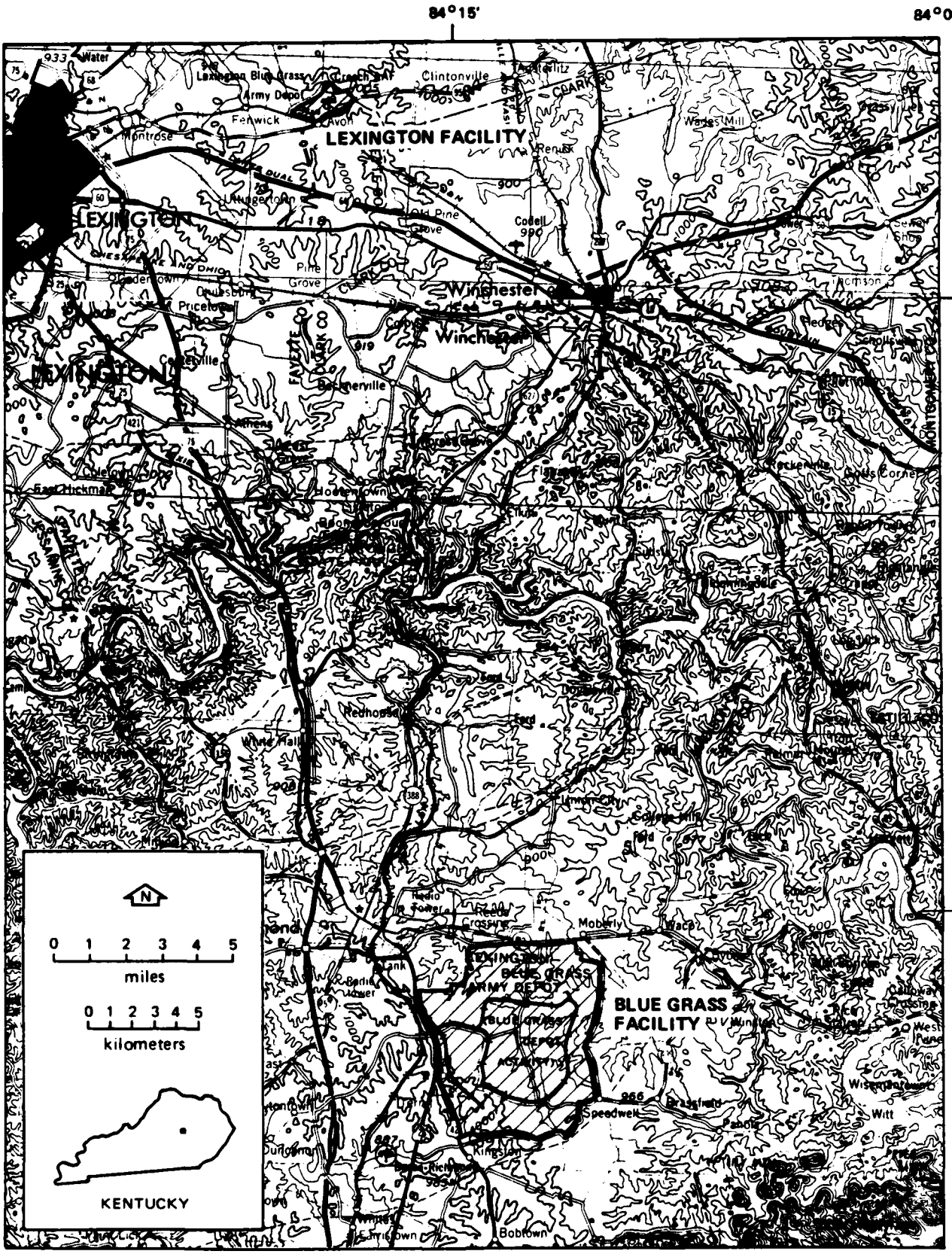
1.0 INTRODUCTION

The following report is an overview of and recommended management plan for the prehistoric and historic archeological resources that are presently known or likely to occur on the Lexington-Blue Grass Depot Activity in Fayette, Bourbon, and Madison counties, Kentucky (Figure 1-1). This facility is an installation of the U. S. Department of the Army DARCOM (Materiel Development and Readiness Command), which as a reservation of public land has responsibilities for the stewardship of the cultural resources that are located on it. The assessments and recommendations reported here are part of a larger command-wide cultural resource management program (the DARCOM Historical/Archeological Survey, or DHAS), which is being conducted for DARCOM by the U. S. Department of the Interior's National Park Service (NPS). The following is that portion of the facility-specific survey that focuses on the prehistoric and historic resource base of the Lexington-Blue Grass Depot Activity, and was developed in accordance with the Level B requirements as set forth in the archeological project Work Plan (Knudson, Fee, and James 1983). A companion architectural study is in preparation by the National Park Service's Historic American Building Survey (HABS), but is not yet available (William Brenner, personal communication 1983).

1.1 PURPOSE AND NEED

A corpus of Federal laws and regulations mandate cultural resources management on DARCOM facilities. Briefly these are:

- The National Historic Preservation Act of 1966 as amended (80 Stat. 915, 94 Stat. 2987; 16 USC 470), with requirements to,



Note: Base map is the USGS Winchester, KY, 1:250,000 topographic quad (1957, revised 1979) and the Louisville, KY; IND; OHIO 1:250,000 quad (1956, revised 1969)

Figure 1-1. MAP OF THE GENERAL VICINITY OF THE LEXINGTON–BLUE GRASS DEPOT ACTIVITY: LEXINGTON AND BLUE GRASS FACILITIES

inventory, evaluate, and where appropriate nominate to the National Register of Historic Places all archeological properties under agency ownership or control (Sec. 110(a)(2))

- prior to the approval of any ground-disturbing undertaking, take into account the project's effect on any National Register-listed or eligible property; afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the proposed project (Sec. 106)

- complete an appropriate data recovery program on an eligible or listed National Register archeological site prior to its being heavily damaged or destroyed (Sec. 110(b), as reported by the House Committee on Interior and Insular Affairs [96th Congress, 2nd Session, House Report No. 96-1457, p. 36-37])

- Executive Order 11593 (36 FR 8921), whose requirements for inventory, evaluation, and nomination, and for the recovery of property information before site demolition, are codified in the 1980 amended National Historic Preservation Act

- The Archeological and Historic Preservation Act of 1974 (88 Stat. 174, 16 USC 469), which requires that notice of an agency project that will destroy a significant archeological site be provided to the Secretary of the Interior; either the Secretary or the notifying agency may support survey or data recovery programs to preserve the resource's information values

- The Archeological Resources Protection Act of 1979 (93 Stat. 721, 16 USC 470aa; this supersedes the Antiquities Act of 1906 [93 Stat. 225, 16 USC 432-43]), with provisions that effectively mean that:

- The Secretary of the Army may issue excavation permits for archeological resources on DARCOM lands (Sec. 4)

- No one can damage an archeological resource on DARCOM lands without a permit, or suffer criminal (Sec. 6) or civil penalties (Sec. 7)

- 36 CFR 800, "Protection of Historic and Cultural Properties" (44 FR 6068, as amended in May 1982); these regulations from the Advisory Council on Historic Preservation set forth procedures for compliance with Section 106 of the National Historic Preservation Act

- Regulations from the Department of the Interior setting forth procesdures for determining site eligibility for the National Register of Historic Places (36 CFR 60, 36 CFR 63), and standards for data recovery (proposed 36 CFR 66)

- United States Department of the Army procedures and standards for preserving historic properties (32 CFR 650.181-650.193; Technical Manual 5-801-1; Technical Note 78-17; Army Regulation 420-40); and procedures for implementing the Archaeological Resources Protection Act (32 CFR 229).

These procedures should be integrated with planning and management to insure continuous compliance during operations and management at each facility. This can best be achieved by an understanding of the procedures implied by the regulations and an awareness of the cultural resources potential at each facility.

1.2 THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

The government-owned, government-contracted Lexington-Blue Grass Depot Activity consists of two facilities. The 780-acre Lexington

facility is located 13 miles from the cities of Paris, Lexington, and Winchester, Kentucky, in Fayette and Bourbon counties, and consists mainly of administrative areas and an airfield (Figures 1-1, 1-2). The 14,596-acre Blue Grass facility is located six miles south of Richmond, Kentucky, in Madison County and consists of ammunition storage areas, general supply storage, and utilities and administrative areas (Figures 1-1, 1-3). Construction of the Lexington facility began on July 1, 1941 and in April, 1942, at the Blue Grass facility. The mission of both facilities is to operate a multi-purpose depot activity providing for the receipt, storage, issue, and maintenance of assigned commodities.

Construction at the Lexington facility is concentrated in the southern portion of the acreage (Figure 1-2), while construction at the Blue Grass facility covers a significant portion of all lands (Figure 1-3). One large reservoir is located at the Blue Grass facility, along with smaller dammed lakes scattered throughout both facilities (Figure 1-2, 1-3).

1.3 SUMMARY OF PREVIOUS ARCHEOLOGICAL WORK CONDUCTED ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

One archeological survey has been conducted on the Blue Grass portion of the Lexington-Blue Grass Depot Activity (U. S. Army Corps of Engineers 1983; Appendix B of this report). A literature and records check and pedestrian reconnaissance of a 28-acre parcel designated for proposed facility construction failed to produce evidence of either prehistoric or early (pre-1900) historic cultural resources.

No archeological resources are presently recorded on the facilities. Based on nineteenth- and twentieth-century platbooks and maps (Beers 1876, 1877; Hewitt 1861; Hoeing 1884; Mullin 1904) and the U. S. Army land acquisition map (U. S. Army 1942), two potential historic resources are documented on the Lexington facility and 133 on the Blue Grass facility. An architectural survey of the facilities is in progress by HABS/HAER.

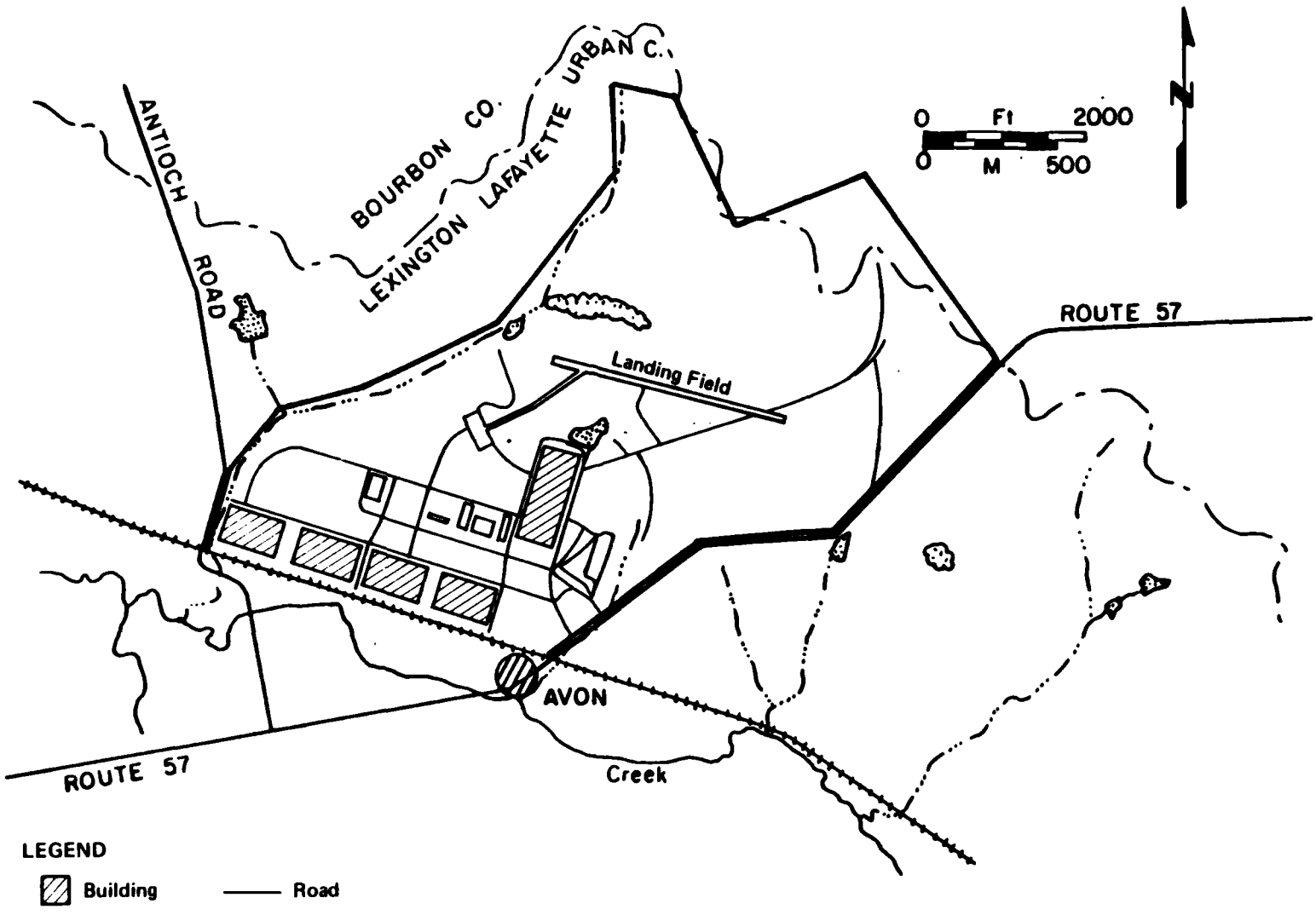


Figure 1-2. MASTER BASE MAP OF THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY: THE LEXINGTON FACILITY

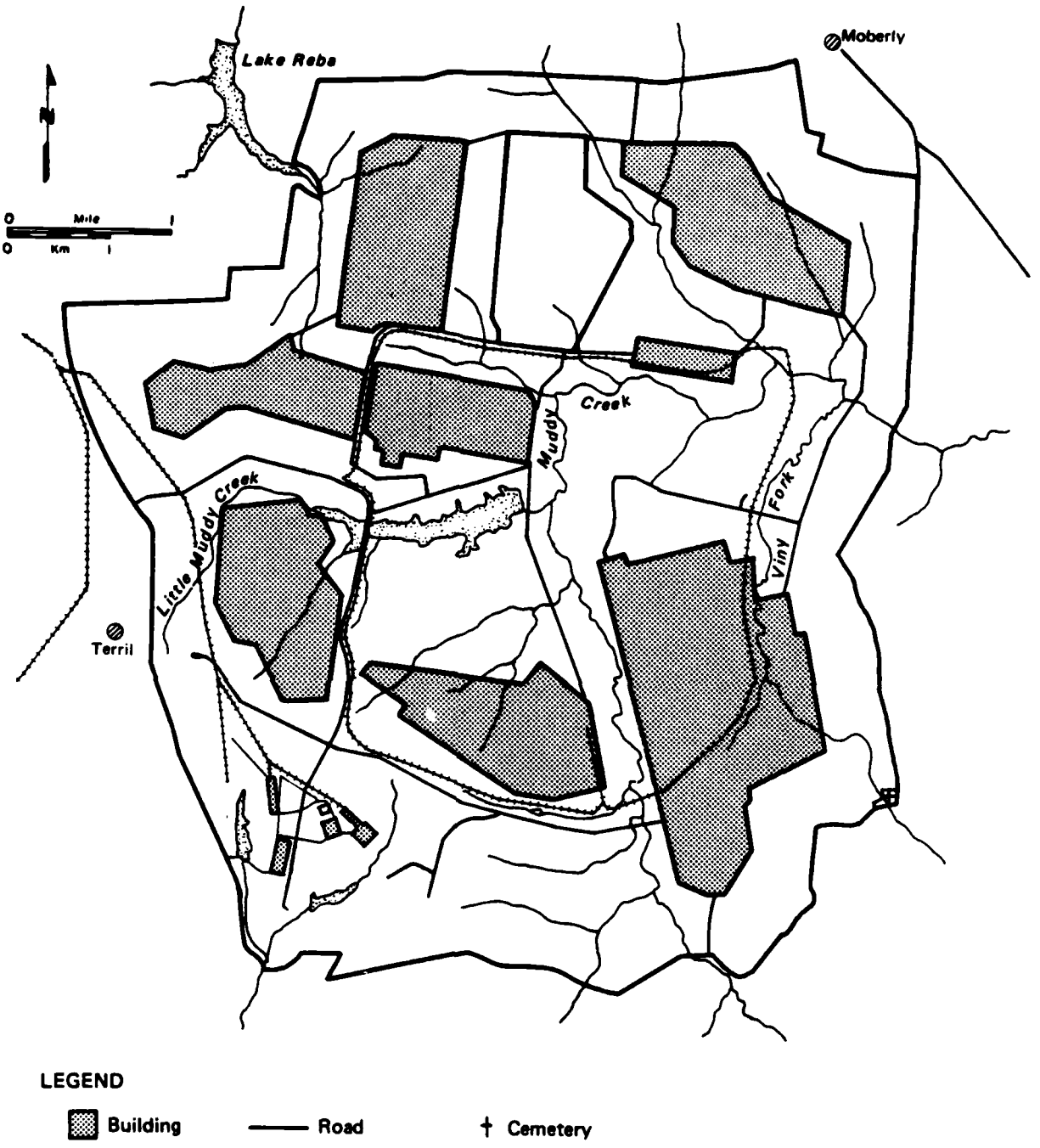


Figure 1-3. MASTER BASE MAP OF THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY: THE BLUE GRASS FACILITY

1.4 THE SOCIOCULTURAL CONTEXT OF THE ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

The lack of known archeological sites on the Lexington-Blue Grass Depot Activity is due to the lack of scientific research conducted within the facility boundaries. It is estimated that approximately 500 sites are located within 50 miles of the facility (Mary Cronan Oppel, personal communication 1983). As of March 17, 1983, a total of 161 sites are known in Fayette County and 77 sites in Madison County (Office of State Archeology n.d.). These sites date to the following periods: Paleo-Indian (prior to 8000 BC), Archaic (8000 to 1000 BC), Woodland (1000 BC to AD 1000), and Late Prehistoric (AD 700 to 1650). The major value of any prehistoric archeological resources on the facility lies with scientific researchers. Any direct ties to modern-day Native American groups would be remote.

Insofar as can be determined from historical sources, there are no archeological resources on the Lexington-Blue Grass facility dating from the historic period that could be of ethnic concern to the Native American community. It is possible that there are archeological remains of historic Native American culture on the Lexington-Blue Grass facility property, but additional fieldwork will be required to locate and identify them.

For the most part, the nineteenth-century cultural resources are associated with Euroamericans who followed the westward movement of the frontier into eastern Kentucky, where they established rural agricultural settlements. Consequently, the nineteenth-century cultural resources are most significant to descendants of such Euroamerican pioneers and to persons having a scholarly interest in the nineteenth-century settlement and development of the east-central U. S. The cultural resources dating to the twentieth century developed out of the nineteenth-century cultural base and, therefore, are significant to the same groups.

One of the values of archeological resources on the facility is to scientific researchers who investigate cultural adaptations through time. The information obtained from any sites on the facility is also important to the general public whether or not individuals are direct descendants of Native American or early immigrants in the area. Archeologists may study climatic changes, site location, acculturation, and introduction of disease, for example, and their effects on past social, political, religious, and economic systems. Results of these studies may provide important information to modern groups of people because by learning of past adaptations we may better understand present situations and anticipate the effects of current policy or decisions. Finally, any archeological resources on the Lexington-Blue Grass Depot Activity may be important in the prservation of our national heritage.

2.0 AN OVERVIEW OF THE CULTURAL AND RELEVANT NATURAL HISTORY OF THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

This section presents a brief discussion of the physical and cultural environment of the Lexington-Blue Grass Depot Activity. These data provide a base line for considering historic land use, and assessing archeological site information to produce an effective management plan for facility lands. In addition, this section describes pertinent regional archeological research directions.

2.1 THE PHYSICAL ENVIRONMENT

This section describes the modern earth, water, climatic, plant, and animal resources that were probably available for human use during the historic period. These data can be used as a baseline against which paleoenvironmental resources may be inferred.

2.1.1 The Earth Resources

The Lexington-Blue Grass Depot Activity is located in the Outer Bluegrass physiographic region of the Interior Low Plateau Province (Fenneman 1938:415). It consists largely of rolling plains dissected by Muddy Creek, Little Muddy Creek, Viny Fork, and Hays Fork. Average elevation is 940 feet (286 m) with a range of 859 feet (262 m) to 1030 feet (314 m).

Geologic outcrops within the area of the Lexington-Blue Grass Depot Activity include limestone, dolomite, shale, siltstone, and alluvium (Turnbow and Jobe 1981, based on Black 1975 and Simmons 1967). More

specifically, the Outer Bluegrass region consists mainly of the Ordovician Maysville and Richmond formations of limestone (Fenneman 1937:430). Boyle dolomite, chert nodules, and fluvial cherts from these formations were used prehistorically (Turnbow and Jobe 1981).

The Blue Grass facility soils are classified into four associations (Newton et al. 1973). Soils of the Lowell-Faywood-Cynthiana-Rock outcrop association located in the extreme southwestern and northwestern portions of the facility are deep, well-drained, gently sloping soils on wide ridgetops and side slopes. The eastern Beasley-Brassfield-Otway soil association soils occur on narrow ridgetops and one side slopes; these soils are similar to those above. The soils of the western wide ridgetops and drainages are classified into the Shelbyville-Mercer-Nicholson association. Laurence-Mercer-Robertsville association soils occur in the northern portion of the facility and are poorly to moderately well drained soils on broad flats, wide ridgetops, and along drainageways.

Soils on the Lexington facility include Maury, Mercer, Lowell, and Loradale silt loams. Maury series soils are deep, well drained, acid soils on gentle slopes and along drainageways in the central and northern part of the facility. Mercer silt loam is an acid soil with a fragipan development at a depth of about 22 inches. This soil series occupies very little area on the Depot Activity; it occurs locally along ridgetops and drainageways in the northern part of the facility. Lowell and Loradale soils are also well drained, acid soils occuring on ridgetops and side slopes in the northeast and central portions of the facility.

2.1.2 Water Resources

All lands of the Lexington-Blue Grass Depot Activity are part of the Kentucky River watershed. The major water resources on the Blue Grass facility are Muddy Creek, Little Muddy Creek, and Viny Fork. One large reservoir is located on this facility along with smaller dammed lakes scattered throughout. Small intermittent streams in the extreme

western and southern portions constitute the water resources on the Lexington facility.

2.1.3 Modern Climate

The temperatures in the region of the Lexington-Blue Grass Depot Activity range from an average of 37° F. (3° C) in the winter months to an average of 75° F. (24° C) during the summer (Newton et al. 1973). Extreme temperatures are infrequent and of short duration; temperatures in excess of 100° F. (38° C) or less than 0° F. (-18° C) occur only about once a year (Turnbow and Jobe 1981:18). The growing season averages 200 days and annual precipitation averages 48 inches (122 cm) (Newton et al. 1973:99-101). Winds are predominantly from the south and average about 11 mph (Preston et al. 1964:116-117).

2.1.4 Plant Resources

The Lexington-Blue Grass Depot Activity lies within the Bluegrass Section of the Western Mesophytic Forest Region (Braun 1950:126-127, Wharton and Barbour 1973:18). A description of the Clark County, Kentucky, vegetation is provided in Turnbow and Jobe (1981:18-19). The vegetation is a unique mosaic of community types which persisted in local microhabitats during regional environmental shifts (Braun 1950:529). Elements of the blue ash-oak savanna-woodland, oak-hickory forest (Bryant 1981, 1983), mixed mesophytic forest (Wharton and Barbour 1973) and the swamp forest (Meijer et al. 1981) are present. There is no virgin forest in the Bluegrass section of Kentucky (Wharton and Barbour 1973); however, some old specimens suggestive of the original vegetation do remain. These include blue ash, bur oak, white oak, Shumard's red oak, chinkapin oak, pin oak, swamp white oak, Kentucky coffeetree, shagbark hickory, American elm, Ohio buckeye, and red mulberry (Bryant et al. 1980:156; Turnbow and Jobe 1981:18-19). Beech occurs locally on poorly drained spots (Braun 1950:129). In addition, pignut hickory, box elder, spice bush, and cane, a grass used extensively by Native Americans for utility purposes, were noted in the original vegetation at the time of the Kentucky Geological Survey in 1857 (Owens 1857:66-73; 1861:114-119).

A biological survey of the region (Neel 1938) included understory plants that may have been significant historically as well as prehistorically. These are pawpaw, sassafras, witchhazel, dogwood, persimmon, chokecherry, elderberry, gooseberry, blackberry, dewberry, summer grape, sorrel, strawberry, Indian turnip, nettle, cress, and spring beauty. Wild food remains have also been recovered from dry rockshelter sites in the vicinity of the Depot Activity. Remains include nuts such as acorn, walnut, butternut, hickory, hazelnut, and chestnut, as well as seeds and fruits of sumac, pawpaw, American plum, grape, and blackberry. Possible prehistoric cultigens (e.g., squash or pumpkin, bottle gourd, sunflower, marsh elder, canary grass, and corn) have also been recovered from rockshelter sites in Kentucky (Cowan 1976:87-99; Jones 1936:147-165).

2.1.5 Animal Resources

The rolling topography and entrenched streams of the Lexington-Blue Grass facility provide suitable habitats for numerous species of mammals, birds, reptiles, amphibians, fish, and shellfish. Turnbow and Jobe (1981:20-21) have compiled a list of animals in Clark County today; the following discussion is based on this. Mammals found in the area today that may have been economically important to Native Americans include opossum, raccoon, striped skunk, red and gray fox, woodchuck, grey and fox squirrel, cottontail rabbit, white-tailed deer, muskrat, and beaver (Barbour and David 1974; Neel 1938). Birds that may have been utilized seasonally include ducks, geese, hawks, cranes, herons, doves, and quail (Barbour 1973; Neel 1938). Turtles, timber rattlesnakes, crayfish, mussels, and numerous game fish (e.g., blue catfish, bluegill, carp, bass, channel catfish, crappie, drum, mudcat, speckled cat, rock bass, smallmouth bass, sunfish, warmouth bass, yellow bullhead) are other animal resources in the area (Barbour 1971; Cater 1970; Jones 1973; Neel 1938). Faunal remains from archeological sites or reported by early historic explorers include bison, elk, wolf, mountain lion, bobcat, turkey, and dog (Filson 1962; Funkhouser 1925; Turnbow and Jobe 1981).

2.1.6 Paleoenvironment

Pollen analysis indicates that in general, Midwestern areas once covered by glacial ice show phytogeographic movement with a transition from spruce-fir through pine to broad leaf deciduous trees (Deevy 1949: 1935-59). Table 2-1 presents a summary of the paleoenvironmental reconstruction presently available for the general region of the Lexington-Blue Grass facility, and includes a summary by Rolinson (1964) and a palynological study from Silver Lake in west-central Ohio, some 150 miles north of Lexington (Ogden 1966). Cool, moist climatic conditions of the late glacial period were replaced by warmer, drier conditions between 11,000 and 9300 BP. Warmer temperatures prevailed until about 1300 BP when the cooler/moister conditions of recent times were established.

2.2 THE CULTURAL ENVIRONMENT

A brief overview of the cultural chronology of the Lexington-Blue facility and surrounding region within a radius of approximately 100 miles (161 km) is presented in Table 2-2. The Lexington-Blue Grass facility consists mainly of gently rolling uplands with more dissected areas surrounding the drainages. The potential exists for the preservation of subsurface structural remains (e.g., pit features) despite surface erosion of some A soil horizons. In those areas where surface erosion has exposed the B horizon soil, it is unlikely that in situ cultural middens or shallow subsurface features will remain. The possibility of buried deposits exists in the floodplain areas of the facility.

2.2.1 Prehistory

The Lexington-Blue Grass Depot Activity is located within the Ohio archeological region (Morgan 1952). Prehistoric traditions represented within Fayette and Madison counties include Paleo-Indian, Archaic, Woodland, and Fort Ancient. Even though the facility is located within the Ohio archeological region, it borders the Southeast archeological

Table 2-1. A SUMMARY OF THE ENVIRONMENTAL HSTORY OF THE AREA OF THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

Rolingson 1964[1] (Kentucky in general) Radiocarbon dates		Ogden 1966 Silver Lake, West-central Ohio Radiocarbon dates, Pollen	
Date	Inferred Climate	Date	Inferred Climate
4500 BP -Present	Temperatures shifting from moderately warm to present conditions	1300 BP -Present	Cooler, moister climate; rich mesophytic forest, increased beech
7000-4500 BP	Temperatures distinctly warmer than at present. Cochrane readvance, 6500-7500 BP, Prairie Peninsula	3600-1300 BP	Climate warmer and/or drier than at present; maximum in hickory pollen
10,150-7000 BP	Period of rising temperatures	9800-3600 BP	Moist and warming climate (elm, ironwood maximum) followed by warm, dry climate, the Altithermal, then return to cooler, moister climate (oak-beech-walnut)
13,000-10,700 BP	Late glacial climate	11,000-9800 BP	Dry, warm climate; pine with birch and oak
		ca. 11,000 BP	Moist, cool period; spruce-fir with oak and pine

[1]Rolingson's summary is derived from information in Antevs 1953, 1957; Deevy 1949; Dillon 1956; Ewing and Donn 1956; Flint 1957; Fuller 1935; Hough 1958; Jillson 1931; McFarlan 1943; Martin 1958; and Smith 1957.

Table 2-2. A SUMMARY OF THE CULTURAL CHRONOLOGY OF THE AREA OF LEXINGTON-BLUE GRASS DEPOT ACTIVITY

Cultural Unit					
Tradition	Period or Phase	Date[a]	General Settlement Patterns	General Subsistence Systems	Kinds of Archeological Remains Representative of Period
American	Late Industrial	AD 1900 to Present	Migration of European coal miners seeking employment; improvement of roadways and electrical service occurs; conservation of forests undertaken; population movement from rural areas begins	Agriculture; diversified manufacturing; service and recreational/ leisure industries	Dominance of American manufactured goods; automatic machine-made bottles, decal-decorated ceramics, plastic disposable packaging
	Early Industrial	AD 1820 to AD 1900	Small-scale industry such as agricultural products emerges; distilling, tobacco manufacturing manufacture of farm implements, and packing industry dominate; timber and land development undertaken	Agriculture; coal mines; breweries; sawmills; hardware	English white ironstone ceramics at beginning of period; American ceramics dominating at end of period; clay marbles; semiautomatic mold-blown bottles; canning jars with metal rims and glass liners; wire nails
	Homestead	AD 1794 to AD 1820	Settlers from Pennsylvania, Maryland, Virginia, and the Carolinas enter region; Bluegrass area develops as agricultural, commercial, and legal center; Lexington superseded in economic importance by Louisville, Kentucky	Agriculture; sawmills; flourmills; tanneries; foundries; craft shops	Post and beam structures during early part of period; some brick structures; English ceramics dominant; free-blown glass containers
	Frontier	AD 1763 to AD 1794	Region being explored by surveyors and Long Hunters; scattered settlements established; hostilities between Native Americans and English settlers heighten; permanent towns of Harrodsburg and Boonesboro established	Subsistence crops; corn, wheat, squash, livestock, and poultry; stills; gristmills; hunting; gathering; trading	Plank wall fortifications; round and hewed log cabins; post and beam structures; English creamware and pearlware refined wares; handwrought nails; free-blown glass containers; kettle brass
Colonial	European Competition	AD 1730 to AD 1763	English begin to challenge French control of Ohio River Valley; hostilities resolved by Treaty of Paris in 1763; English establish trading posts and land companies	Hunting; gathering; trading	English salt-glazed and creamware ceramics; free-blown bottles; gunflints; metal knives; hand-forged nails; small villages with house remains; pit features; middens
	Early Exploration	AD 1668 to AD 1730	French first to explore region and erect forts Miami, Ouiatenon, and Vincennes to secure region against English encroachment; English based in Virginia begin expeditions into area; Shawnee village of Eskippakithiki occupied at time of contact	Hunting; gathering; trading	Transient hunting and special activity camps; stone tools; European trade goods such as glass beads, brass kettles, metal knives and axes, silver ornaments, guns; small temporary log structures; cache pits

Table 2-2. A SUMMARY OF THE CULTURAL CHRONOLOGY OF THE AREA OF LEXINGTON-BLUE GRASS DEPOT ACTIVITY (continued)

Cultural Unit					
Tradition	Period or Phase	Date[a]	General Settlement Patterns	General Subsistence Systems	Kinds of Archeological Remains Representative of Period
Late Prehistoric	Fort Ancient	AD 700 to AD 1650	Sedentary settlements, many surrounded by log palisades. Mississippian settlement patterns and mortuary practices characterize the later Fort Ancient villages	Maize subsistence with beans, and squash as well as wild foods and hunting	Shell tempered pottery. Bowls, jars, salt pans; some vessels with handles or other appendages. Small triangular points; bone and shell ornaments
Woodland	Late	AD 450 to AD 1000	Villages and smaller camps and rockshelter occupations. Stone burial mounds replace earthworks	Hunting and gathering with increased reliance on cultivated plants	Jacks Reef Corner Notched, Chesser (Steubens) Notched & large pentagonal points; Newton Cordmarked ceramics; chipped chert and ground stone celts, limestone discs, rectangular slate gorgets, well developed bone industry
	Middle	AD 200 to AD 450	Short term camps located in uplands; burials in earth mounds	Hunting and gathering with increased reliance on cultivated plants	Side Notched 23-type and Coosa-type projectile points
	Early - Adena	1000 BC to AD 200	Short term camps located in uplands; burials in earth mounds	Hunting and gathering; increased reliance on plant resources	First evidence of ceramic technology: Fayette Thick, Adena plain cordmarked; projectile points include Cresap, Adena, Turkey Tail, Robbins and Wade
Archaic	Late	4000 BC to 1000 BC	Repeatedly occupied seasonal base camps of a larger settlement population concentrated near rivers or smaller base camps in a wide range of environmental zones	Hunting and gathering with increased exploitation of riverine environment; first evidence for plant cultivation (squash, gourd, sunflower, and possible marshelder and chenopod)	McWhinney, Brewerton projectile points
	Middle	6000 BC to 4000 BC	Slightly greater populations in smaller seasonal or base camps; decreasing mobility	Hunting of smaller game animals, increasing utilization of riverine resources and nut resources in a warmer, drier environment	Morrow Mountain and Big Sandy projectile points
Archaic	Early	8000 BC to 6000 BC	Small seasonal or base camps located in uplands, rockshelters, narrow valleys and terraces of major stream valleys	Hunting of smaller and more varied forest game, especially white-tailed deer; gathering of plant resources during Hypsithermal	Charleston Corner Notched, Kirk, Plevna, LeCroy and Kanawha stemmed projectile points; grinding stones, drills

Table 2-2. A SUMMARY OF THE CULTURAL CHRONOLOGY OF THE AREA OF LEXINGTON-BLUE GRASS DEPOT ACTIVITY (continued)

Cultural Unit					
Tradition	Period or Phase	Date[a]	General Settlement Patterns	General Subsistence Systems	Kinds of Archeological Remains Representative of Period
Paleo-Indian	---	12000 BC to 8000 BC	Small seasonal or base camps located on higher terraces, ridgetops, or knolls; near natural routes leading to river lowlands or close to salt licks and springs	Hunting and gathering of Pleistocene and recent fauna and plant resources in cooler, moister environmental conditions	Scrapers, fluted projectile points including Cumberland, Quad, and Greenbrier; Blue Grass region has one of the highest concentrations of these artifacts in the state

[a] Prehistoric dates from Clay 1980, and Turnbow and Jobe 1981; other pertinent sources include Boisvert 1982, Gatus and Boisvert 1977, Rolingson 1964. Historic dates are from Channing 1877; Clark 1965, 1968; Raitz 1980; Rice 1975; and Shaler 1888.

region (Griffin 1952). For this reason, any prehistoric sites on the facility or in the surrounding area may be highly significant in the investigation of inteeraction between the two areas.

The Paleo-Indian tradition (12,000 to 8000 BC) was characterized by low population density (Rolingson 1964). Sites were small seasonal or possibly base camps. Economic pursuits included hunting of Pleistocene fauna and gathering of plant resources in a cooler, moister environment.

The Archaic tradition (8000 to 1000 BC) was characterized by a greater population density in seasonal or base camps located in a wide range of environmental zones.

The Woodland tradition in Kentucky is divided into three periods or phases. During the Early Woodland or Adena phase (100 BC to AD 200), ceramics were first manufactured and earthen mounds were constructed and used as burial sites (Webb and Snow 1974). During the Middle (AD 200 to 450) and Late Woodland (AD 450 to 1000) phases, reliance on cultivated plants increased, burials in earthen mounds continued, and burials in stone mounds occurred.

During the Late Prehistoric or Fort Ancient tradition (AD 700-1650), sedentary settlements occurred, many surrounded by log palisades (Griffin 1943). These settlements were supported by maize (corn), bean, and squash agriculture, and hunting and gathering. The Fort Ancient people who inhabited Kentucky between AD 700 and 1650 may represent the prehistoric counterpart of the historic Shawnee (Clay 1980:19). Thus, late prehistoric Fort Ancient and early enthnohistoric sites may be significant in this regard. See Table 2-2 for a detailed discussion of each prehistoric tradition.

2.2.2 Ethnohistory

In the eighteenth century, Kentucky was primarily a hunting ground for the Cherokee, Chickasaw, Shawnee (Callender 1978:622-635), and the

Delaware (Goddard 1978:213-239). The large Shawnee village known as Eskippakithiki (Beckner 1932; Callender 1978:623; Gatus and Boisvert 1977:22-23) was located in eastern Clark County, approximately 30 air miles from the facility. This Native American settlement is one of "the few known to have existed in Kentucky at the time of contact...." (Gatus and Boisvert 1977:22-23). (See Table 2-2 for detail.)

2.2.3 History

The earliest exploration of the Ohio Valley, of which Kentucky is a part, is not well known. The land that is now Kentucky was primarily a hunting ground for such Indian groups as the Cherokee, the Chickasaw, the Shawnee, and the Delaware, who contested bitterly for sole usage of the area (Callender 1978; Goddard 1978). Both French and English explorers claimed the region as their own, but their claims were dubious at best. By 1675 the English in Virginia were determined to settle the lands west of the Appalachian Mountains and numerous expeditions were undertaken. Both the English and the French traded with local Indian groups, but it was France who erected forts Miami, Ouiatenon, and Vincennes in an effort to protect her empire in the Ohio River Valley (Rice 1975).

By the beginning of King George's War in 1744, English traders had begun to challenge French supremacy in the Ohio Valley. The Treaty of Aix-la-Chapelle, which brought the war to a close in 1748, left the situation in the Ohio Valley unresolved. In an effort to increase trade with the Indians and to establish permanent settlements, Virginian speculators formed the Loyal Land and Ohio Land companies (Clark 1968).

The French were more adept at securing alliances with the Indians than were the English, and by 1753 the English position in the Ohio Valley was shattered. The outbreak of the French and Indian War and the subsequent Treaty of Paris (1763) ended the conflict and resulted in the transfer of French possessions in North American to England. Permanent settlement of Kentucky was delayed by the Proclamation of 1763, which prohibited colonization west of the Appalachian Mountains. Nevertheless,

surveyors and Long Hunters (such as Daniel Boone) traversed the area, paving the way for further settlement.

The Bluegrass region rapidly developed as a commercial, agricultural, and legal center. The area of the Lexington-Blue Grass facility was one of the earliest settled in Kentucky. The facility is located within that area included in the original state of Kentucky when it separated from Virginia in 1792. The surrounding towns were some of the earliest settlements including Paris in 1774, Richmond in 1784, and Winchester in 1792; these served as the major economic and social centers for the surrounding settlers. Lexington, incorporated as a town in 1782 by the Virginia Legislature and touted as the "Athens of the West," became the primary commercial town of the old frontier and produced an abundance of tobacco, hemp, corn, and livestock for the eastern states (Clark 1968:56-58; Raitz 1980:7). Lexington was also the focus for primitive roads such as the Wilderness Trail. The Lexington-Blue Grass facility is located between two famous historic trails, the Warrior's Path and the Wilderness Road (Myers 1928). The Warrior's Path, 25 miles east of the facility, linked the early historic Shawnee towns and continued from the Carolinas and Georgia through eastern Tennessee. The Path was used by Indians to conduct raids on other tribes and also on whites. The Wilderness Road was the route followed by Daniel Boone from southwestern Virginia to central Kentucky. It is located approximately 25 miles southwest of the facility.

By 1810 Lexington had reached its peak economic development in manufactured goods but was superseded by Louisville, a town which occupied a strategic location by the Falls of the Ohio River (Clark 1968:63, 67). Industry in early nineteenth-century Lexington was small-scale, producing those items that could not be cheaply transported from the river cities and processing the agricultural products of the hinterland. Four major industries predominated in the post-Civil War recovery: distilling, tobacco processing, manufacturing of farm implements, and meat-packing (Raitz 1980:50-51). Railroad networks

being built during this period replaced the primitive roadways. Timber and land buyers purchased vast quantities of land and mineral rights and by 1880 coal was being mined in the area (Clark 1965). Livestock breeders continued to raise cattle, hogs, mules, and the racehorses for which the Bluegrass region is so famous.

After 1900, many coal miners from neighboring states and Europe entered Kentucky in search of employment (Clark 1965). World War I launched Kentucky into the development of a modern highway system for marketing coal, lumber, and farm products. Population began to shift from rural to urban areas and food and tobacco products remained the predominant manufactures.

In 1941 the Lexington-Blue Grass Depot was established in Fayette County, Kentucky. A new set of historic archeological resources has been created through the construction of the Lexington-Blue Grass facilities and through the other activities that have taken place. Although these resources are too recent to fall under statutory protection, they do constitute an important cultural asset that deserves conservation management in the future.

2.3 ARCHEOLOGICAL RESEARCH DIRECTIONS

A state-wide research design preliminary to an RP3 study (Resource Preservation Protection Plan, Aten 1982) has been completed for the state of Kentucky (Clay 1980). Seven preservation management areas have been defined: 1) Purchase, 2) Green River, 3) Falls, 4) Cumberland, 5) Bluegrass, 6) Upper Kentucky/Licking, and 7) Eastern. Within each area various culture periods can be investigated, including Paleo-Indian, Archaic, Woodland, Late Prehistoric, and Historic.

The Lexington-Blue Grass Depot Activity is contained within the Bluegrass management area. Approximately 19 percent of Kentucky state is in the Bluegrass area, and 19 percent of all archeological sites recorded within the state (1508 of 7984) are in this area (Clay 1980:45). Because

the Bluegrass area was one of the first areas settled in Kentucky and because of the large number of burial mounds in the region, a great deal of early archeological work was conducted in this area. However, because of the over-emphasis on Adena burial mounds, "the Bluegrass continues to suffer from the inability of archeologists to define and date a sequence of cultural complexes which reflect the total prehistoric time period" (Clay 1980:64). Preliminary research questions have been formed for each of the major cultural periods.

Paleo-Indian sites in Kentucky consist mainly of isolated artifactual finds representing hunting losses. Even though hunting was a major subsistence activity, Paleo-Indian groups also utilized other food resources. Subsistence strategies, social structure and adaptations to changing natural environments are important research questions.

During the Archaic tradition in Kentucky, economic pursuits and associated technologies and settlement patterns became increasingly diversified. In addition, population density, group size, sedentism, and mortuary behavior increased. Research on Archaic sites is directed to both the causes and effects of these changes.

Investigation of the trends of increased mortuary behavior, sedentism, reliance on cultivated plants, status differentiation, and use of exotic raw materials can be examimed with data from Woodland sites. Particular research questions include the mechanism and effects of the introduction of ceramics and the social complexity as manifest in Adena sites during the Early Woodland; increased dependence on cultivated plants, increased mortuary behavior and social differentiation, and the effects of the Hopewell Interaction Sphere during the Middle Woodland; and the supposed increase of egalitarianism, yet lack of dramatic changes in subsistence practices during the Late Woodland.

The Late Prehistoric period in eastern Kentucky, known as Fort Ancient, is differentiated from the Woodland tradition by population

consolidation in large villages which were often stockaded, and reliance upon maize (corn) agriculture. Co-existing at this time was the Middle Mississippian tradition in western Kentucky characterized by large ceremonial centers with temple mounds, differential treatment of the dead, a complex social structure and maize agriculture. Given the proximity of the two cultures, pertinent research questions include the delineation of the varying social, economic, and political systems, and the reasons for such. Any prehistoric sites on the or within the surrounding area may be highly significant in the investigation of interaction between the two cultures.

Fort Ancient peoples may represent the historic Shawnee (Clay 1980:19). Important research questions for the ethnohistoric period include examination of late prehistoric subsistence and settlement patterns and changes thereof as a result of contact, the effect of Euroamerican disease and tribal warfare on Native American populations, and acculturation of Native American communities following Euroamerican contact.

Little research has been conducted on historic archeological sites in Kentucky and detailed research questions have not yet been formulated (Clay 1980:19-20). Pertinent research questions may include the sociocultural (especially economic) effects of French and English trade on Native American, Euroamerican, and European cultures; adaptations by American farmers to the local environments and to regional and national economic and political events (including environmental factors affecting selection of farmstead units, dependence on imported goods, agricultural practices, trade and communication routes, and popular artifactual styles); and reconstruction of the lifestyles and sociocultural values of historic Native Americans and rural farming communities of the American tradition.

3.0

AN ASSESSMENT OF ARCHEOLOGICAL RESOURCE PRESERVATION AND SURVEY ADEQUACY

Environmental and historic constraints may limit the preservation of archeological sites. These constraints are considered in this section, as are previously conducted resource investigations. Finally, an assessment is made as to the adequacy of data collection, documenting any gaps that may exist.

3.1 ENVIRONMENTAL CONSTRAINTS TO SITE PRESERVATION

Environmental constraints to site preservation are in large measure a matter of landforms and/or original site depositional environment. The Lexington-Blue Grass facility lies within the Interior Low Plateau Province, a region of rolling uplands. As a whole, the region has been impacted by both plowing and deforestation. Thus, it is likely that there has been historic and modern disturbance of the ground surface or even upper three feet (1 m) of deposits. In areas where the B soil horizon is exposed, few in situ archeological resources are likely to remain. Overall, besides erosion due to plowing, deforestation or timbering, there is no reason to suspect that site preservation due to environmental reasons would be anything but good.

3.2 HISTORIC AND RECENT LAND USE PATTERNS

Prior to federal purchase, the Lexington-Blue Grass Depot Activity was used for agricultural purposes. Currently, 9507 acres of the Blue Grass facility are leased for grazing and timber harvesting. These

one-year leases with a two-year option are let in all open areas of the Blue Grass facility except in Areas O (GDA 9), M (GDA 15), and F (GDA 5) (Table 3-1, Figure 3-2). No row crops are grown and only hay is harvested. Thus, no systematic plowing occurs. At the Blue Grass facility, 1500 acres are under Woodland Management and 622 acres are under Fish and Wildlife Management.

Table 3-1 and Figures 3-1 and 3-2 present a summary of the major areas of ground disturbance, along with their associated area, ratio of disturbed to total area, and location. A total of 6426 acres (2602 ha) or 44 percent of the Blue Grass facility and 380 acres (154 ha) or 49 percent of the Lexington facility have been impacted by modern construction. These areas of ground disturbance include igloo storage, a burning and detonating area, magazines, warehouses, a test range, sewage plant and lake, a reservoir, administrative areas and an air strip. Ratios of disturbed to total area vary between 1:3 and 1:1; depths of disturbance vary between 0 and 25 feet (Table 3-1).

In sum, given the extensive construction (i.e., 44 to 49 percent at each of the facilities), it is probable that the integrity of any archeological deposits has been affected.

3.3 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS; COVERAGE AND INTENSITY

One archeological survey has been conducted on a small portion of the Lexington-Blue Grass Depot Activity designated for the construction of a proposed rocket demilitarization facility (U. S. Army Corps of Engineers 1983; Appendix B, this report). Pedestrian field survey of approximately 28 acres was conducted in the northeast part of the Blue Grass Facility near the confluence of an unnamed tributary and Muddy Creek. In addition to visual surface inspection, shovel tests were conducted at 12- to 15-meter intervals along north-south and east-west transects. No standing structures or remnants thereof were observed. A literature and records check of the area in addition to field survey failed to produce any

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

GDA No.[a]	Type of Disturbance	Date Conducted (yr)	Reference[b]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area[c]	Location of Disturbed Area[d]						Coincidental Sites[f]
							UTM		Legal Reference			USGS Quad Map[e]	
							Northing	Easting	Township	Range	Section		
Blue Grass Facility													
1	Igloo Storage	1942	General Site Maps	432.4	5	1:3	4174000 4175750 4175000	743400 743300 742240	Not Applicable (N/A)			R765 M752	81-84,7
2	Igloo Storage	1942	General Site Maps	567.0	5	1:3	4172340 4174200 4174420	746160 745900 743700	N/A			M752	90,91
3	Igloo Storage	1942	General Site Maps	1211.14	5	1:3	4172300 4175500 4175780	747000 746000 747160	N/A			M752	72,94-97, 99,100-102, 105-110,127
4	Igloo Storage	1942	General Site Maps	649.2	5	1:3	4178000 4178700 4179680	748320 748400 746160	N/A			M752	27,28
5	Igloo Storage	1942	General Site Maps	508.0	5	1:3	4177680 4177700 4179660	745700 745000 745060	N/A			M752	31-34
6	Igloo Storage	1942	General Site Maps	468.3	5	1:3	4177660 4177800 4179550	744400 743400 744560	N/A			M752	35,37,38
7	Igloo Storage	1942	General Site Maps	425.4	5	1:3	4176600 4177260 4177080	743600 743720 741460	N/A			M752 M765	---
8	Igloo Storage	1942	General Site Maps	318.2	5	1:3	4176440 4176640 4177100	745380 743700 745300	N/A			M752	40,48,133
9	Burning and Detonating Area	UN	General Site Maps	417.2	4-6	9:10	4172000 4172560 4172580	746280 746480 745280	N/A			M752	112-115, 117

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY (continued)

GDA No.[a]	Type of Disturbance	Date Conducted (yr)	Reference[b]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area[c]	Location of Disturbed Area[d]						
							UTM		Legal Reference			USGS Quad Map[e]	Coincidental Sites[f]
							Northing	Easting	Township	Range	Section		
10	Smokeless Powder Magazine	1943	General Site Maps	58.8	3	9:10	4177360 4177560 4177700	747100 747220 746420	N/A			M752	53
11	Inflam. Material Warehouse, Ammunition Renovation Shop	1955	General Site Maps	14.7	3	1:3	4176150 4176300 4176300	745950 745830 746160	N/A			M752	---
12	Storehouses	1950	General Site Maps	14.7	3	1:3	4176150 4176320 4176350	747600 747700 747500	N/A			M752	64,65
13	Surveillance Test Range	UN	General Site Maps	7.4	Surficial	1:3	4176900 4177000 4177000	746100 745950 746200	N/A			M752	---
14	Surveillance Workshop, Laundry, Dunnage, Rec. Center, Reservoir	1943-67	General Site Maps	459.7	8-10	1:3	4174720 4175300 4176180	744160 744900 744520	N/A			M752	76-78,80, 88
15	Administration, Gen. Purpose Warehouses, Water Plant Housing Dam and Lake	1942-44	General Site Maps	785.1	8-10	9:10	4172250 4172760 4173150	742900 744080 742220	N/A			M752	11,12,85, 86
16	Sewage Plant	1943	General Site Maps	45	20-25	1:1	4171850	743100	N/A			M752	---

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY (concluded)

GDA No.[a]	Type of Disturbance	Date Conducted (yr)	Reference[b]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area[c]	Location of Disturbed Area[d]						
							UTM		Legal Reference			USGS Quad Map[e]	Coincidental Sites[f]
							Northing	Easting	Township	Range	Section		
Lexington Facility													
1	Administration	1941	Facility Maps	371.7	8-10	1:1	4217700 4217000 4217340	735280 735120 733860	N/A			C765	---
2	Air Field	1941	Facility Maps	5.64	Surficial	1:1	4218000	735480	N/A			C765	---
3	Concrete Foundations for Razed Storage Buildings	mid 1950s	Facility Maps	2.4	Surficial	2:3			N/A			C765	---

[a] UTM Zone 16. There is no Township Range information available for this part of Kentucky. USGS Maps: R765 = Richmond South, Kentucky 7.5 min quad, 1965, photorevised 1979; M752 = Moberly, Kentucky 7.5 min quad, 1952, photorevised 1979; C765 = Clintonville, Kentucky 7.5 min. quad, 1965; photorevised 1976. UTMs computed by Center for American Archeology Staff.

[b] Facility Maps include Lexington-Blue Grass Army Depot General Site Map, 15 July 1974, 15 Dec. 1970, drawings No. MP 5-1-62 sheets 3 and 4 out of 17; and drawings No. 18-C2-03 sheets 4 and 5 out of 28.

[c] Ratios were determined as percentile ranges, i.e., 0-30, 30-60, 60-90, and 90-100 percent.

[d] UTM = Universal Transverse Mercator coordinates, Zone 16. If the area is less than 10 acres in extent, the coordinates record the approximate center of the site. If it is larger, they record the corners of a 3-or-more sided figure than encloses the site. Coordinates have been calculated specifically by CAA for this study. Township/range divisions for this part of Kentucky.

[e] R765 = Richmond Souty, KY, 7.5 min. quad (1965, photorevised 1979);
M752 = Moberly, KY, 7.5 min. quad (1952, photorevised 1979);
C765 = Clintonville, KY, 7.5 min. quad (1965, photorevised 1978).

[f] All coincidental sites are potential historic resources; see Table 4-1.

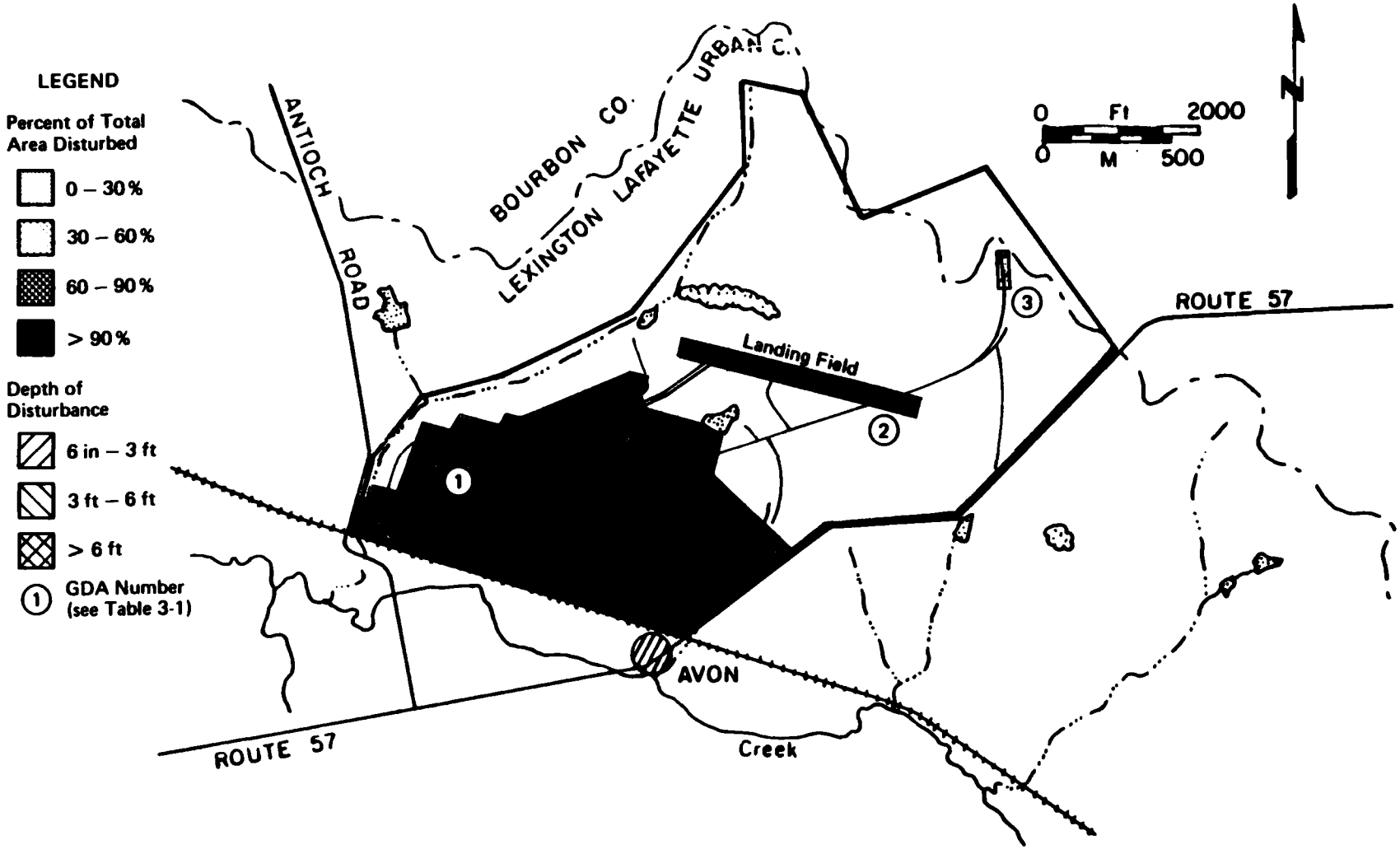
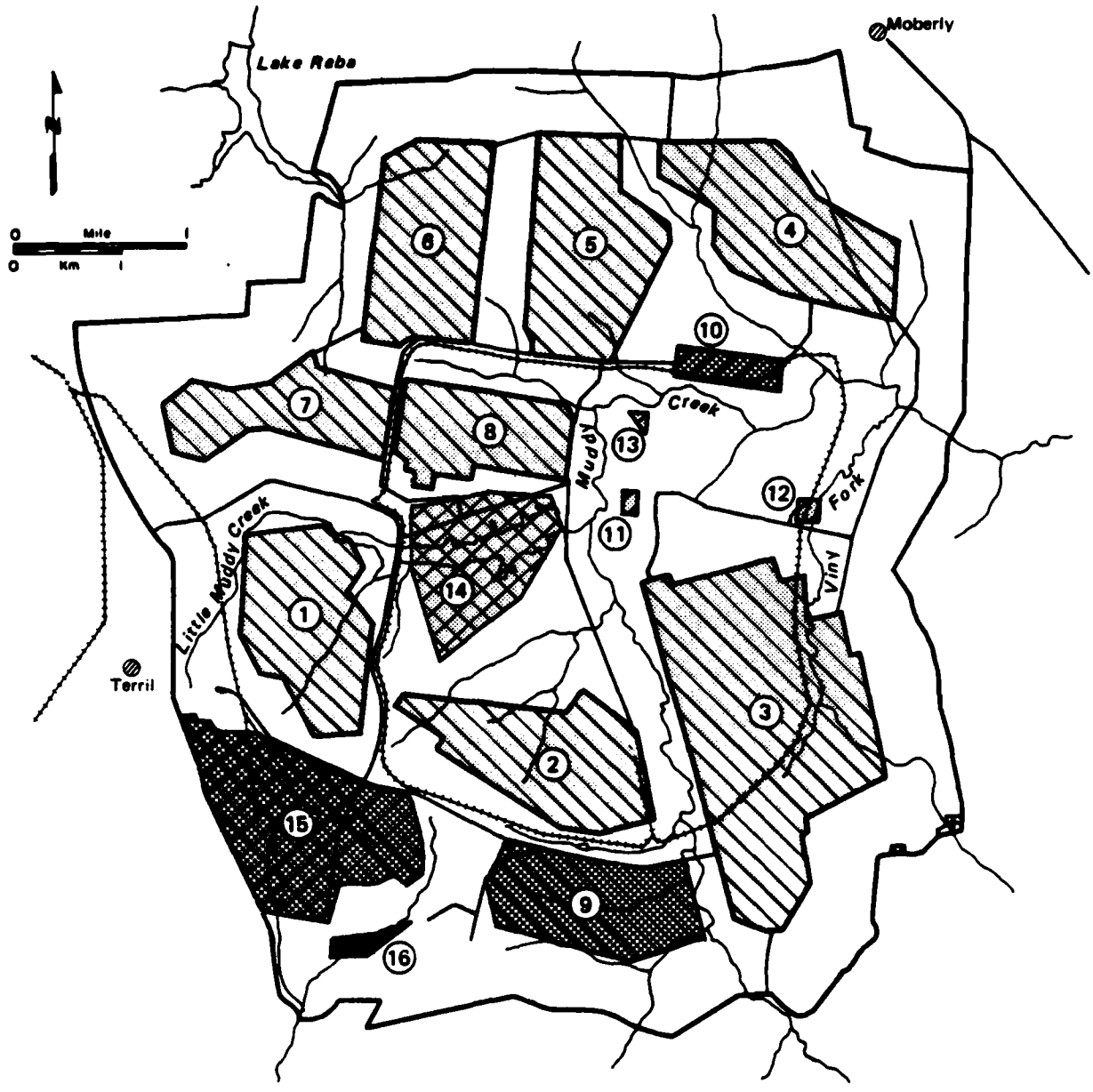


Figure 3-1. A MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY: THE LEXINGTON FACILITY



LEGEND

Percent of Total Area Disturbed	Depth of Disturbance
0 – 30 %	6 in – 3 ft
30 – 60 %	3 ft – 6 ft
60 – 90 %	> 6 ft
> 90 %	(1) GDA Number (see Table 3-1)

Figure 3-2. A MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY: THE BLUE GRASS FACILITY

evidence of either prehistoric or early historic (pre-1900) cultural resources (U. S. Army Corps of Engineers 1983:8).

As of March 1983, a total of 161 sites have been documented in Fayette County and 77 sites in Madison County (Office of State Archeology Site files n.d.). These include a breakdown of sites by chronological period for each county: Fayette, 21 multicomponent sites (no known single component Paleo-Indian sites, although Paleo-Indian components are present at other sites), 11 Archaic, 21 Woodland, 7 Late Prehistoric and 9 historic sites, and Madison, 8 multicomponent sites but no single component Paleo-Indian sites, 2 Archaic, 5 Woodland, no single component Late Prehistoric sites, and 11 historic sites.

3.4 SUMMARY ASSESSMENT OF DATA ADEQUACY, GAPS

Given the lack of environmental constraints to site preservation, the limited extent of archeological investigations conducted on the Depot Activity (28 acres on the Blue Grass Facility), and the large number of sites recorded within a 50 mile (80 km) radius of the facilities, it is expected that currently unrecorded archeological resources exist on the Lexington-Blue Grass Depot Activity. For the purposes of the assessment of the adequacy of the known data and the gaps in the record, resources located within the facility boundaries are considered to be unknown. The entire Depot Activity presents a gap in the archeological record of eastern Kentucky.

4.0

KNOWN ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

No archeological sites are known to exist on the Lexington-Blue Grass Depot Activity. However, 135 potential historic sites (133 on the Blue Grass facility and two on the Lexington facility) have been identified based on nineteenth- and twentieth-century platbooks, atlases, and government maps (Tables 4-1, A-1; Figures A-1, A-2). These include 96 farmsteads, 38 cemeteries and one school. These sites may be significant in the investigation of American Tradition farmers to the local environment and to regional and national economic and political events. Most of these potential sites probably date to the American Tradition; little information is known regarding them.

Table 4-1. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

Site Number, Name[a]	Reference	Description	Research Value CR[b]
LBG 1	Beers 1876	Farmstead	2
LBG 2	Hoeing 1884	Farmstead	2
LBG 3	Beers 1876	Farmstead	2
LBG 4	Hoeing 1884	Farmstead	2
LBG 5	U.S. Army 1942	Cemetery	3
LBG 6	Beers 1876	Farmstead	2
LBG 7	Beers 1876	Farmstead	1
LBG 8	Hoeing 1884	Farmstead	2
LBG 9	Hoeing 1884	Farmstead	2
LBG 10	Beers 1876, Hoeing 1884	Farmstead	2
LBG 11	Beers 1876	Farmstead	1
LBG 12	Beers 1876, Hoeing 1884	Farmstead	1
LBG 13	Hoeing 1884	Farmstead	2
LBG 14	Beers 1876, Hoeing 1884	Farmstead	2
LBG 15	Beers 1876, Hoeing 1884	Farmstead	2
LBG 16	U.S. Army 1942	Cemetery	3
LBG 17	Beers 1876	Farmstead	2
LBG 18	Beers 1876, Hoeing 1884	Farmstead	2
LBG 19	Beers 1876, Hoeing 1884	Farmstead	2
LBG 20	U.S. Army 1942	Cemetery	3
LBG 21	U.S. Army 1942	Cemetery	3
LBG 22	Beers 1876	Farmstead	2
LBG 23	U.S. Army 1942	Cemetery	3
LBG 24	U.S. Army 1942	Cemetery	3
LBG 25	U.S. Army 1942	Cemetery	3
LBG 26	U.S. Army 1942	Cemetery	3
LBG 27	U.S. Army 1942	Cemetery	3
LBG 28	Beers 1876, Hoeing 1884	Farmstead	1
LBG 29	U.S. Army 1942	Cemetery	3
LBG 30	U.S. Army 1942	Cemetery	3
LBG 31	Beers 1876	Farmstead	1
LBG 32	U.S. Army 1942	Cemetery	3
LBG 33	U.S. Army 1942	Cemetery	3
LBG 34	Beers 1876, Hoeing 1884	Farmstead	1
LBG 35	U.S. Army 1942	Cemetery	3
LBG 36	Beers 1876	Farmstead	2
LBG 37	Beers 1876	Farmstead	1
LBG 38	U.S. Army 1942	Cemetery	3
LBG 39	Hoeing 1884	Farmstead	2
LBG 40	Beers 1876, Hoeing 1884	Farmstead	1

Table 4-1. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY (continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
LBG 41	Beers 1876, Hoeing 1884	Farmstead	2
LBG 42	Beers 1876	School	2
LBG 43	U.S. Army 1942	Cemetery	3
LBG 44	Hoeing 1884	Farmstead	2
LBG 45	U.S. Army 1942	Cemetery	3
LBG 46	U.S. Army 1942	Cemetery	3
LBG 47	Hoeing 1884	Farmstead	2
LBG 48	Hoeing 1884	Farmstead	1
LBG 49	Beers 1876, Hoeing 1884	Farmstead	2
LBG 50	Beers 1876, Hoeing 1884	Farmstead	2
LBG 51	Beers 1876, Hoeing 1884	Farmstead	2
LBG 52	Hoeing 1884	Farmstead	2
LBG 53	U.S. Army 1942	Cemetery	3
LBG 54	Beers 1876	Farmstead	2
LBG 55	Beers 1876, Hoeing 1884	Farmstead	2
LBG 56	U.S. Army 1942	Cemetery	3
LBG 57	Beers 1876	Farmstead	2
LBG 58	Hoeing 1884	Farmstead	2
LBG 59	Beers 1876, Hoeing 1884	Farmstead	2
LBG 60	U.S. Army 1942	Cemetery	3
LBG 61	Beers 1876	Farmstead	2
LBG 62	Beers 1876	Farmstead	2
LBG 63	Beers 1876	Farmstead	2
LBG 64	Beers 1876, Hoeing 1884	Farmstead	1
LBG 65	Beers 1876, Hoeing 1884	Farmstead	1
LBG 66	U.S. Army 1942	Cemetery	3
LBG 67	Beers 1876	Farmstead	2
LBG 68	Beers 1876	Farmstead	2
LBG 69	Beers 1876, Hoeing 1884	Farmstead	2
LBG 70	Beers 1876, Hoeing 1884	Farmstead	2
LBG 71	Beers 1876, Hoeing 1884	Farmstead	2
LBG 72	Beers 1876, Hoeing 1884	Farmstead	1
LBG 73	Beers 1876, Hoeing 1884	Farmstead	2
LBG 74	Beers 1876	Farmstead	2
LBG 75	Beers 1876	Farmstead	2
LBG 76	U.S. Army 1942	Cemetery	3
LBG 77	Beers 1876, Hoeing 1884	Farmstead	1
LBG 78	U.S. Army 1942	Cemetery	3
LBG 79	Beers 1876, Hoeing 1884	Farmstead	2
LBG 80	Beers 1876, Hoeing 1884	Farmstead	1

Table 4-1. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY (continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
LBG 81	Beers 1876, Hoeing 1884	Farmstead	1
LBG 82	Beers 1876	Farmstead	1
LBG 83	Hoeing 1884	Farmstead	1
LBG 84	Beers 1876	Farmstead	1
LBG 85	Beers 1876, Hoeing 1884	Farmstead	1
LBG 86	Beers 1876, Hoeing 1884	Farmstead	1
LBG 87	Beers 1876	Farmstead	2
LBG 88	U.S. Army 1942	Cemetery	3
LBG 89	Beers 1876, U.S. Army 1942	Cemetery	3
LBG 90	Beers 1876, Hoeing 1884	Farmstead	1
LBG 91	U.S. Army 1942	Cemetery	3
LBG 92	Hoeing 1884	Farmstead	2
LBG 93	U.S. Army 1942	Cemetery	3
LBG 94	Beers 1876, Hoeing 1884	Farmstead	1
LBG 95	Beers 1876, Hoeing 1884	Farmstead	1
LBG 96	Beers 1876, Hoeing 1884	Farmstead	1
LBG 97	Beers 1876, Hoeing 1884	Farmstead	1
LBG 98	U.S. Army 1942	Cemetery	3
LBG 99	U.S. Army 1942	Cemetery	3
LBG 100	U.S. Army 1942	Cemetery	3
LBG 101	U.S. Army 1942	Cemetery	3
LBG 102	U.S. Army 1942	Cemetery	3
LBG 103	Hoeing 1884	Farmstead	1
LBG 104	Beers 1876, Hoeing 1884	Farmstead	1
LBG 105	Beers 1876, Hoeing 1884	Farmstead	1
LBG 106	U.S. Army 1942	Cemetery	3
LBG 107	Beers 1876, Hoeing 1884	Farmstead	1
LBG 108	U.S. Army 1942	Cemetery	3
LBG 109	Beers 1876, Hoeing 1884	Farmstead	1
LBG 110	U.S. Army 1942	Cemetery	3
LBG 111	Hoeing 1884	Farmstead	2
LBG 112	Hoeing 1884	Farmstead	1
LBG 113	Hoeing 1884	Farmstead	1
LBG 114	Hoeing 1884	Farmstead	1
LBG 115	Hoeing 1884	Farmstead	1
LBG 116	U.S. Army 1942	Cemetery	3
LBG 117	Beers 1876, Hoeing 1884	Farmstead	1
LBG 118	Beers 1876, Hoeing 1884	Farmstead	2
LBG 119	Hoeing 1884	Farmstead	2

Table 4-1. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY (concluded)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
LBG 120	Hoeing 1884	Farmstead	2
LBG 121	Hoeing 1884	Farmstead	2
LBG 122	Hoeing 1884	Farmstead	2
LBG 123	Hoeing 1884	Farmstead	2
LBG 124	Beers 1876	Farmstead	2
LBG 125	Hoeing 1884	Farmstead	2
LBG 126	Beers 1876, Hoeing 1884	Farmstead	2
LBG 127	Beers 1876, Hoeing 1884	Farmstead	1
LBG 128	Beers 1876	Farmstead	2
LBG 129	U.S. Army 1942	Farmstead	2
LBG 130	Beers 1876	Farmstead	2
LBG 131	Beers 1876	Farmstead	2
LBG 132	Beers 1876	Farmstead	2
LBG 133	Hoeing 1884	Farmstead	1
LBG 134	Hewitt 1861, Beers 1877, Mullin and Corbin 1904	Farmstead	2
LBG 135	Hewitt 1861, Beers 1877, Mullin and Corbin 1904	Farmstead	2

[a] Sites have been given "potential site register numbers" only within the context of this overview and planning effort, and are numbered sequentially across the facility. Their locational data are provided in Table A-1, and they are illustrated in Figure A-2.

[b] The Confidence Rating (CR) of the potential resource base's research value is a general assessment (based on available data) of the authors' confidence in the site's physical integrity and value (e.g., representation of activity diversity or uniqueness, temporal distinctiveness or reflection of diachronic relationships, representativeness). The CR is a ranked assessment: 1 = the site is likely to have little value or the information about it is too unreliable for making a value judgement; 2 = the resource may have research value and the authors are moderately confident that the information about it is reliable; 3 = the resource is likely to have high research value and the authors are quite confident that the information about it is reliable.

5.0 AN ASSESSMENT OF THE SIGNIFICANCE OF THE ARCHEOLOGICAL RESOURCE BASE ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

Even though no known prehistoric or historic archeological sites are presently recorded on the Lexington-Blue Grass Depot Activity, it is highly likely that both prehistoric and historic resources (particularly those designated as "potential") will be located through archeological survey. The significance of the predicted archeological resource base is discussed in Section 5.1, and the ideal goals and objectives for implementation of future archeological research are presented in Section 5.2.

5.1 THE SIGNIFICANT RESOURCE BASE

A tabular summary of the predicted archeological resource base is presented in Table 5-1. The significance of any potential sites on the facility is summarized below. From known survey data from Fayette and Madison counties, Kentucky, sites related to all prehistoric and historic time periods are expected.

Assignment of research values (RV) for the respective resource types is somewhat difficult, owing to a lack of site-specific data. Each resource type has been rated on the basis of (a) its potential for containing significant research information, and (b) its presumed physical integrity. In rating the sociocultural value (SCV) of the resource types, less emphasis was placed on the presumed physical integrity of the sites. The confidence ratings for both RV and SCV are largely subjective owing to the paucity of site-specific information.

Table 5-1. SUMMARY OF SIGNIFICANT ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

Temporal Unit	Thematic Unit	Resource Type	Type Occurrence[a] Known Occurrences (no.)	Potential Occurrences (no.)	Other Likely Occurrences	Sociocultural Association	Landform Association	Physical Integrity	Research Value[b]	RV CR[c]	Sociocultural Value[d]	SCV CR[c]
Paleo-Indian	Big game procurement and use	Probable kill area or camp	0	0	+	Native American	Uplands	Unknown	4	2	1	3
Archaic	Small game and wild plant procurement and use	Probable small seasonal camp	0	0	+	Native American	Uplands	Unknown	4	2	1	3
Early Woodland	Small game and plant procurement	Probable small seasonal or temporary camp	0	0	++	Native American	Uplands	Unknown	4	2	1	3
Middle Woodland	Small game, wild plant, and cultivated plant procurement and use	Probable camp and burial	0	0	++	Native American	Uplands	Unknown	4	2	1	3
Late Woodland	Small game, wild and cultivated plant procurement and use	Probable small camp	0	0	++	Native American	Uplands	Unknown	4	2	1	3
Late Prehistoric	Villages, burial mounds, hunting camps, special use camps	Habitation	0	0	++	Native American	Uplands	Unknown	4	2	1	3
American	Religious	Cemetery	0	38	++	Euro-American		Good	4	3	5	3
American	Educational/ Social	School	0	1	++	Euro-American		Fair	3	2	5	3
American	Domestic/ Agricultural Technology	Farmstead	0	96	++	Euro-American		Fair	5	2	4	3

[a] The number of presently known or potential archeological resources of this type is specified here. In addition a judgement has been made as to the likelihood that other members of this resource occur within the facility, based on an analysis of the ethnohistoric or historic land use patterns and/or a review of the landform patterning of prehistoric materials. The probability of these additional occurrences has been noted as negative (-), positive (+), or highly positive (++).

Table 5-1. SUMMARY OF SIGNIFICANT ARCHEOLOGICAL RESOURCES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY (continued)

[b] This is a subjective summary assessment of the overall research value (RV) of the resource class. It is an evaluation of the class' quality of preservation, representation of activity diversity or uniqueness, and temporal distinctiveness or reflection of diachronic relationships. It incorporates the need to avoid triviality, but to acquire what may be redundant data so as to discern patterns among those data. Based on these research values, the resource classes under discussion are ranked from 0 (no value) to 5 (highest value), including "NA" if such an evaluation is believed to be impossible given the available information.

[c] The Confidence Rating (CR) is a further evaluation of the perceived reliability of the research (RV) or sociocultural (SCV) values of the resource class. 1 = the judgement is more guess than science, and likely not to be reliable; 2 = the judgement is moderately reliable; 3 = the judgement is most likely reliable.

[d] This is a subjective summary assessment of the overall sociocultural value (SCV) of the resource class. It is an evaluation of the social, religious, or political importance of the resource to a contemporary community, from 0 (no value) to 5 (highest value).

Possible Paleo-Indian remains within the facility proper would probably consist mainly of isolated artifacts. Archeological resources dating to this time period would represent large and small game exploitation and wild plant utilization within the area. If these types of Paleo-Indian remains were to be recovered, they would most likely represent small, seasonably occupied camp sites. Given the sparcity of such remains, the research value associated with them would be very high.

The research value of any Early Archaic sites in particular and the other Archaic sites in general is high on the facility because they afford the investigation of the following: (1) determination of the degree and type of mobility and changes thereof during the Archaic; (2) determination of type and intensity of subsistence base; (3) determination of the effects of Hypsithermal on site location and resource exploitation; and (4) elaboration of the development of sedentism between the Early and Middle Archaic (Brown and Vierra 1983, Ford 1977).

Late Archaic sites on the Lexington-Blue Grass facility may represent more permanent settlements with increased population numbers and group stability. Hunting and gathering of small game animals and utilization of both nut and aquatic resources occurred in a cooler, moister environment. In contrast to previous periods, mortuary sites may occur. The research potential of Late Archaic sites would also be high because of possible evidence of increased sedentism, use of nuts and aquatics, and mortuary behavior.

The Early Woodland period in eastern Kentucky is synonymous with Adena burial mounds. In addition, scattered semi-permanent villages or hamlets may occur where intensive hunting, plant collecting and fishing were the major economic pursuits. The research potential for any Early Woodland sites on the facility is high because they afford the investigation of the ceremonial subsistence and technological aspects of prehistoric society.

Middle Woodland sites generally consist of large burial mounds, geometric earthworks, and dispersed hamlets on floodplains and terraces of major rivers, or small base camps or special use sites. Economic pursuits include hunting and gathering of amphibians, birds, fish, mammals, reptiles, shellfish, seeds and nuts. Horticulture of squash, corn, amaranth, and chenopodium also occurred. Middle Woodland sites located in Kentucky were related to a larger socio-religious-political unit known as Hopewell. The research potential of any Middle Woodland sites on the facility is high.

During the Late Woodland in general, and particularly in the latter stages of the Late Woodland, there is an increase in numbers of sites, artifactual and subsistence remains, and types of sites in the Midwest. There is also an increase in dependence on cultivated foods, particularly corn, beans, and squash. An examination of any Late Woodland sites on the facility would afford an examination of subsistence patterns, decline of the ceremonial complex known as Hopewell, and the effects of population increase.

The Late Prehistoric tradition is manifest within this area of Kentucky by the Fort Ancient aspect of the Upper Mississippian which was probably not tied to the larger socio-political Middle Mississippian culture in western Kentucky. The research potential of these sites on the facility is high because of possible investigations of socio-political and technological differences between the two Mississippian cultures in Kentucky and delineation of ties to the historic Shawnee.

5.2 IDEAL GOALS AND OBJECTIVES

Given the assumption that significant (and presently unidentified) archeological resources are located within the Depot Activity, the following is an outline of a desirable program to manage these resources for the best preservation or use of their research and sociocultural values. An ideal facility archeological resource management program

would encompass identification, evaluation, conservation, excavation and analysis, and interpretation activities. It would emphasize the conservation of significant resources, and their excavation or "use" only to mitigate any unavoidable destruction or damaging activities or in search of important information that is being collected and studied within a well designed research project.

Since no archeological resource surveys have occurred on the Lexington-Blue Grass Depot Activity, the first step in developing a management program is field identification of the sites predicted to be there. Such an identification program should begin with a more intensive and extensive review of oral and archival historic information. The focus of this preliminary review would be to evaluate the historical information base presently available without recourse to any historical archeological investigations, and through consultation with professional historians and people with personal ties to the pre-1941 occupants, evaluate the historic significance of any materials that might be left on the depot. This would complement the more extensive evaluations of natural resource distributions presented within this report as the basis of evaluating the distribution and potential significance of any prehistoric archeological resources there.

The second stage of the identification program would be the field inventory of the undisturbed portions of the depot to identify the surface evidence of any historic or prehistoric archeological sites. Such an identification project would include a pedestrian survey of the depot, with close-interval spacing of survey transects. Large-scale aerial photographs and detailed topographic maps should be used for field reference. Standard forms for recording the surface characteristics of identified prehistoric and historic resources should be completed as part of the inventory procedures and the area and methods of the survey should be well documented. The preferred survey policy for most contemporary projects is to make only minimal collections of artifacts off of site surfaces; however, all categories of cultural remains should be sampled

from each site. In addition, artifacts should be retained that are immediately vulnerable to non-professional collection or damage. Any collected materials should be fully described and appropriately curated, given that all of this is a federal cost.

In addition to a description of the surface evidence of these sites, the ideal inventory would include some kinds of subsurface investigation (e.g., augering, test excavation, remote sensing) to evaluate the contents, extent, and integrity of the identified resources. Finally, this stage should include an identification of the important research or other values inherent in the inventoried sites, both as a basis for the development of future research designs as well as for the evaluation of management options should the resource be threatened with damage or destruction by non-archeological-research activities. For purposes of future research development, the identification and evaluation of the resources needs to be well documented and available to the research community. For future resource management purposes, it needs to be appropriately stated within the U. S. Department of the Interior's terminology and concepts of resource significance.

The prevailing professional approach to archeological resources for the past decade has been one of conservation (Lipe 1977:21)--"Our goal... is to see that archaeological resources everywhere are identified, protected, and managed for maximum longevity." Thus, the ideal objective is to develop a "bank" of significant sites that may be investigated through a variety of techniques, including destructive excavation, only as part of well designed research projects that are scheduled within a regional research program that seeks to maintain the overall range of undisturbed sites for future use. A corollary to this is that the sites should be allowed to be investigated by scientists in a non-reactive situation (i.e., not threatened with immediate destruction of the resource). Such basic investigation of resources on the public lands should be conducted only within research designs that are appropriate to the contemporary regional or broader study questions. It should also be

conducted only within a program that includes long-term protection of the information collected from the resources, and a commitment to the public dissemination of that information.

If an archeological site evaluated as being of research or of sociocultural significance is going to be damaged or destroyed, the ideal objective would be to preserve its included materials and information values through a data recovery program. Such a program would be little different from the non-reactive investigations discussed above, but is likely to be conducted in conjunction with requirements for immediate facility development. Again, an important element in such a data recovery program would be the adequate analysis, curation, and publication of the recovered information.

In the event the installation has accomplished its Section 106 procedures abd finds a previously unidentifiable resource during its ground disturbance and/or construction phase, it will effect compliance using 36 CFR 800.7 procedures.

Thus, in summary the ideal goals for the management of Lexington-Blue Grass Depot Activity archeological resources are to:

- Inventory and evaluate all the resources on the facility
- Conserve the significant sites, allowing their research use only within a regional research design
- Recover the contents and information from any significant resources threatened by damage or destruction
- Provide the public with the substance of the information values that are inherent within or collected from the facility's archeological resource base.

6.0
A RECOMMENDED ARCHEOLOGICAL MANAGEMENT PLAN FOR THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY

6.1 FACILITY MASTER PLANS AND PROPOSED IMPACTS

There is no approved list of plannned construction projects for the Lexington-Blue Grass Depot Activity. One major project, an M55 Ameliorization Facility (PL-2), is planned for construction adjacent to area F on the Blue Grass facility (Table 6-1, Figure 6-1). This 11-acre complex has been given Army priority, while no other projects have (Gary Metcalf, personal communication 1984). In addition, a total of 9507 acres of the Blue Grass facility are leased for agricultural and timbering purposes (PL-1). One year leases with a two year option are let in all open areas except in areas O (GDA 9), N (GDA 15), and F (GDA 5). No leases are let on the Lexington facility.

6.2 APPROPRIATE ARCHEOLOGICAL MANAGEMENT GOALS WITHIN THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY'S MASTER PLAN

6.2.1 General Facility Planning

This overview documents the lack of any known archeological resources and the existence of 135 potential historic resources. This document provides the basis for developing a Historic Preservation Plan (HPP) for the facility in compliance with Army regulations implementing the National Historic Preservation Act of 1966, as amended.

Army Regulation 420-40, drafted pursuant to the National Historic Preservation Act and 36 CFR 800 (Section 1.1) requires that each DARCOM

Table 6-1. A SUMMARY OF ON-GOING AND PLANNED ACTIVITIES ON THE LEXINGTON-BLUE GRASS DEPOT ACTIVITY THAT COULD AFFECT ARCHEOLOGICAL RESOURCES

Activities						Associated Resources				Impacts		
Description	Date[a]	Area	Size (a.)	Estimated Depth Below Surface (ft.)	Ratio of Disturbed to Total Area[b]	Resource Class	Resources Known or Predicted[b]	NRHP Status[c]	Other Value[c]	Direct[c]	Indirect[c]	Mitigation Options
On-going												
Agricultural and timber leases	On-going	PL-1	9507	1-3	1:1	Euroamerican farmstead	P120 L+	INSF	INSF	INSF	INSF	Oral historical and archeological data recovery
Proposed												
M55 Ameliorization facility	UC	PL-2	11	10	9:10	NONE	NONE	NONE	NONE	NONE	NONE	Oral historical and archeological data recovery

[a] Unconfirmed (UC). At present, given Army priority.

[b] Not all the ground within the boundaries of an on-going or proposed activity area will necessarily be affected. This Ratio is an evaluation of the acres of surface projected to be disturbed within a proposed activity area in proportion to the overall size of the area itself.

[c] 120 potential historic sites (P120) with other sites likely (L+).

[d] Insufficient information available for evaluation (INSF).

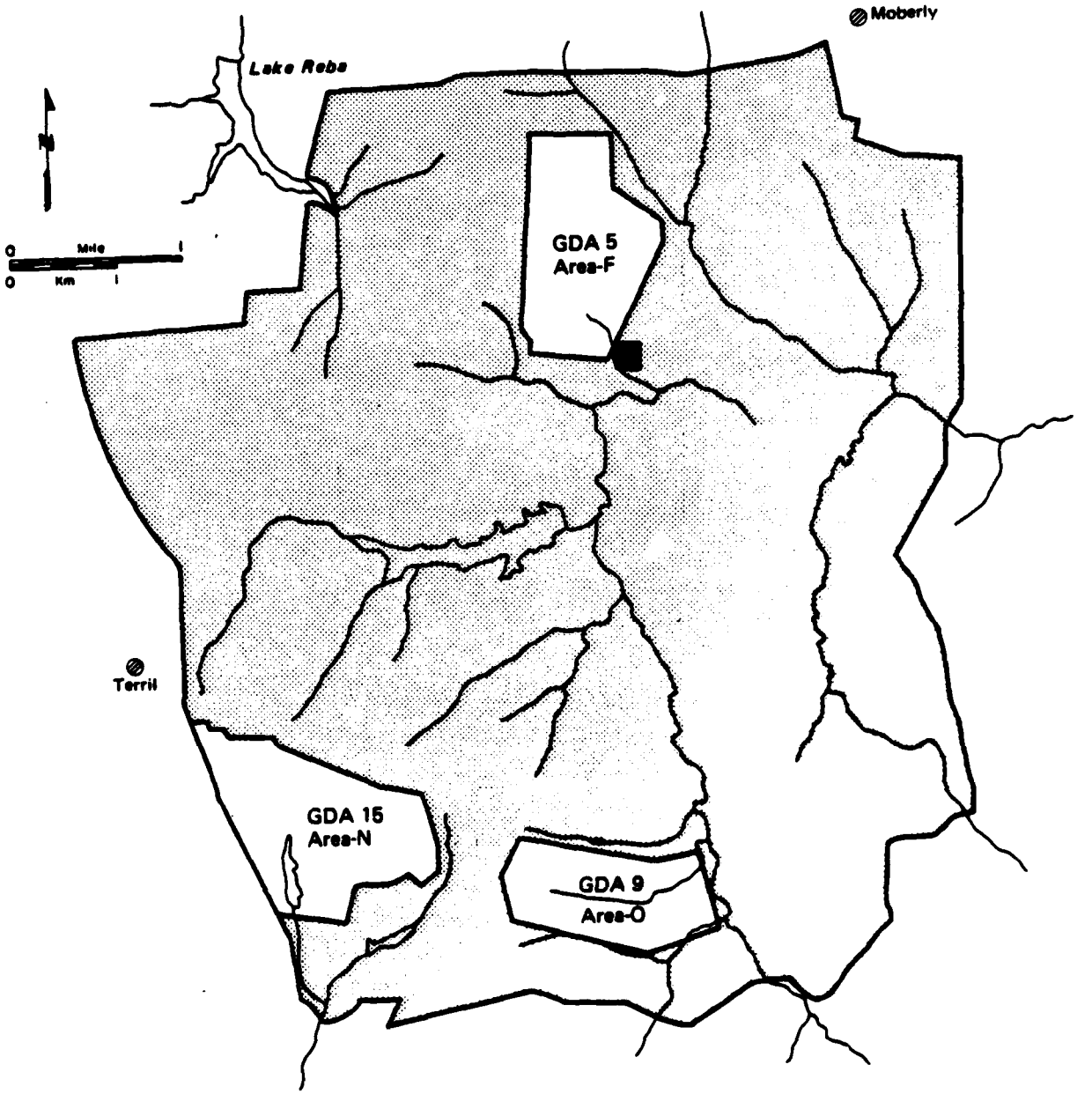


Figure 6-1. A MAP OF AREAS OF ON-GOING OR PLANNED ACTIVITIES ON THE LEXINGTON -BLUE GRASS DEPOT ACTIVITY THAT COULD AFFECT ARCHEOLOGICAL RESOURCES

installation have a Historic Preservation Plan or have documentation on file indicating that there are no installation resources appropriate to such management planning. At present, there is no such negative declaration. Therefore, the present report is organized so as to provide a basis for such a Plan to be developed and implemented on the facility.

The Department of the Army Regulation 420-20 prescribes Army policy procedures and responsibilities for compliance with the National Historic Preservation Act of 1966, as amended; for the maintenance of state-of-the-art standards for preservation, personnel and projects; and for accomplishment of the historic preservation program. The Historic Preservation Plan has the following objectives:

- Provision of historic and archeological data for the installation's information systems
- An outline of priorities for acquiring additional information to determine if there may be additional projects not yet located or identified
- Establishment of a procedure for the evaluation of historic properties
- Provision of guidelines for the management of historic properties
- Implementation of a legally acceptable compliance procedure with the Advisory Council for Historic Preservation (ACHP) and the State Historic Preservation Office (SHPO)
- Integration of historic preservation requirements with the planning and execution of military undertakings such as training, construction, and real property or land use decisions

- Ranking of facility projects by their potential to damage historic properties

- Identification of funding, staffing and milestones needed to implement the plan.

The identification and evaluation of historic and prehistoric resources on the depot has been initiated by the completion of this overview and plan. This needs to be followed by a full identification and evaluation program as outlined in Section 5.2: more extensive oral and archival historic review; field surface and subsurface inventory of all undisturbed depot lands; evaluations of resource significance in terms of U. S. Department of the Interior criteria. Some or all of this recommended work could be postponed until there is a specific ground-disturbing project that requires compliance with the National Historic Preservation Act (see Sections 1.1, 6.2.2), if development of a historic preservation plan more specific than this document is also to be postponed and if such scheduling has been accepted by the Kentucky State Historic Preservation Office (SHPO).

Under any schedule, until the determination has been made that identified prehistoric or historic sites are <u>not</u> significant they must be managed as if they were, for compliance with Section 110(a)(2) of the National Historic Preservation Act:

> (2) With the advice of the Secretary [of the Interior] and in cooperation with the State Historic Preservation Officer for the State involved, each Federal agency shall establish a program to locate, inventory, and nominate to the Secretary all properties under the agency's ownership or control by the agency, that appear to qualify for inclusion on the National Register in accordance with the regulations promulgated under section 101(a)(2)(A). Each Federal agency <u>shall exercise caution</u> to assure than any such property that might qualify for inclusion is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly [underlining added].

As outlined in the previous discussion of ideal archeological management goals (Section 5.2), a recommended next stage in the assessment of the importance of the facility's historic archeological resources is an intensive review of archival material and evaluation of regional historic research objectives. The archival review might focus on information stored in the National Archives and Records Service, as well as a more intensive review of Fayette and Madison Counties land records, wills, and other pertinent documents and interviews of pre-1940s residents of depot lands. This review and evaluation should include consultation with the Kentucky SHPO to identify and prioritize regional historic research questions to which the historic archeological information from identified sites might contribute. The goal of this research would be to define the historic significance that any of the identified sites might have if it had contextual integrity and was to be archeologically investigated.

As discussed in Section 5.2 and required by the National Historic Preservation Act (NHPA), the next step in the identification stage of archeological resource management should be field investigation including subsurface testing (e.g., systematic shovel testing) to locate sites and determine their boundaries, contents, and integrity. NHPA Section 110(a)(2) requires that all federally owned or controlled lands be surveyed to identify all significant archeological properties on them. A strict adherence to this would support the immediate intensive archeological inventory of all Lexington-Blue Grass Depot Activity lands not previously surveyed or not clearly documented as having deep and extensive modern ground disturbance. The current prevailing federal policy about the implementation of this requirement is that it should be a "reasonable" program consistent with the overall schedules, budget, and multiple objectives of the land-managing agency. Given the high likelihood that there are significant prehistoric and historic archeological materials on the depot, it is recommended that it would be most cost-effective to complete the archeological inventory of all undisturbed lands on the facility as soon as it is fiscally possible.

If the archival review and consultation indicate that any of the identified historic sites have potential archeological value, then those need further field investigation to determine their boundaries and integrity.

Based on the historic and field inventory information, the significance of all identified sites should be evaluated following criteria set forth in 36 CFR 60.4 and in accordance with guidelines from the Kentucky SHPO. If sites are judged to be significant, a plan for their long-term management should be developed in the context of overall property management (including the management of any identified ethnohistoric or historic architectural/engineering resources). Such management activities might include resource conservation in place, biannual field review of site condition, public interpretation of resource values, scientific investigation of the sites, and/or planned site destruction by military activities. If significant sites are identified, it is recommended that the DARCOM officer responsible for the Lexington-Blue Grass Depot Activity operations provide the Kentucky SHPO with the opportunity to review and comment on the proposed management plan. If the evaluation is made that none of the sites on the depot is significant, filing of a report to that effect with the SHPO would complete the facility's compliance requirements for preservation planning.

6.2.2 Project-Specific Resource Protection or Treatment Options

Approximately 50 percent of the Lexington-Blue Grass facility has been impacted by modern construction, and any future ground-disturbing activities in those areas is unlikely to need pre-construction review of its potential adverse impacts to significant archeological resources (the exception might be deep new excavation into previously undisturbed deposits beneath modern buildings or structures). However, new ground-disturbing construction in, or leasing of, facility land would be a federal undertaking requiring compliance with Section 106 of the National Historic Preservation Act (see Section 1.1 of this report). Section 106 requires that DARCOM consult with the Kentucky SHPO and the federal

Advisory Council on Historic Preservation about the effects of such an undertaking on significant archeological sites. Without a SHPO-accepted facility preservation plan, it is DARCOM's responsibility to either complete such an evaluation and consultation program for each project or to have on file documentation of the completion of adequate survey and evaluation so as to confirm the absence of or lack of significance of any archeological site that might be affected by the proposed activity.

Since the undisturbed portions of the Lexington-Blue Grass Depot Activity have not been subjected to intensive review, construction or ground-disturbance in areas currently unsurveyed could impact archeological resources. Consequently, if such activity was to occur, survey, evaluation, and perhaps required mitigative data recovery (scientific archeological investigation of a significant site) could be necessary on a project-specific basis. Such evaluation and preservation programs require consultation with several federal agencies, and are frequently time-consuming and may cause construction delays. However, such a project-specific program can usually be expedited if the appropriate preservation planning has been completed and reviewed by the State Historic Preservation Officer.

6.2.3 A Summary of Recommended Management Directions and Priorities for Effective Compliance and Program Development

In order to comply with both long-range historic preservation planning needs, and requirements for evaluating the effect of specific proposed development projects on significant archeological resources, we recommend the following management activities. These are listed in their recommended order of priority:

- Consultation with the Kentucky State Historic Preservation Office (SHPO) about the recommendations in this overview and plan

- Reconnaissance-level survey (and shovel testing) of undisturbed facility lands (8570 acres), and evaluation of the significance

of any archeological resources on them; appropriate treatment of any resources judged to be significant

- Completion of archival and oral historical research to disallow or demonstrate the potential historical significance of presently identified historic archeological sites

- Completion of National Register eligibility assessments for all presently identified archeological resources, which is likely to involve additional field testing of the sites after their historic documentation has been reviewed

- Completion and implementation of a facility historic preservation plan if the resources are determined to be significant.

6.3 ESTIMATED SCOPE OF WORK AND COST LEVELS FOR PRESENTLY IDENTIFABLE MANAGEMENT NEEDS

6.3.1 Scope of Work

The estimated scope of work recommended here is to provide the archival and oral historic evaluation of the significance of the identified historic archeological resources at the Lexington-Blue Grass facility, and the suggested survey of undisturbed lands (including consultation with the SHPO). Because the extent of subsequent field investigations (a testing program or additional surface reconnaissance) is recommended to be a function of the historic evaluation and consultation project, no scopes of work or cost levels are provided for such field efforts.

The milestones for the recommended work would be:

- Completion of Part I, a preliminary draft report on the archival and oral historic research documenting the relative importance

of the historic archeological resources presently identified on the Lexington-Blue Grass Depot, and on needed additional field investigation of potentially significant sites; estimated to require 600 work hours in Kentucky and in Washington DC. Completion of 8570 acres of survey, analysis, and preliminary draft report; estimated to require 1714 hours (this assumption does not include extensive subsurface investigations)

- Completion of DARCOM review of the preliminary draft Part I, as documented by a letter accepting the preliminary draft as appropriate for interagency consultation

- Completion of consultation (including both DARCOM representatives and the historical/archeological consultants) with the Kentucky SHPO about the Part I research and evaluations, as documented in a letter of concurrence from the SHPO; estimated to require 40 consultant hours

- Completion of a report that includes the draft Part I and a draft Part II documenting the consultation process and including the statement of SHPO concurrence; estimated to require 60 consultant hours

- DARCOM review and acceptance of the report including both Parts I and II, and provision of the final report to the Kentucky SHPO.

6.3.2 Implementation and Cost Estimates

Personnel needed for completion of the above-outlined tasks need professional expertise in historic archival and oral historic research, and in prehistoric and historic archeology; that expertise may reside in one person but is more likely to require work effort by at least two people. The archeological professional qualifications should meet the standards of the U. S. Department of the Interior (1983), and the historical professional qualifications should meet the standards of the

U. S. Department of the Interior (1983) and the Council on Public History and other professional historical associations. The individual(s) making the archeological resource evaluations of significance should be skilled in management and compliance procedures, have a thorough understanding of regional historical and archeological needs and goals, and have field and/or laboratory experience in the area.

The archivist/historian/archeologist should be supported by adequate secretarial/drafting personnel as they are needed to complete a final report. The physical plant administering implementation of the project should have adequate word processing and duplication capability to quickly and professionally prepare needed documents and correspondence.

Costs of professional archival expertise, including all necessary travel (using expertise local to each of the Washington DC and Kentucky archival research areas), reference, telecommunications, data management, search fee, and report preparation costs generally average between $25 and $30 per work-hour across the country for archival research and $20 to $25 for reconnaissance survey. This rate does not include business fee or profit, general and administrative costs, or inflation costs, and are expressed in 1984 dollars. At this rate, the 700 hours of professional time estimated for archival, consultation, and reporting activities for the recommended scope of work would have a baseline range of costs of $17,500 to $21,000; while the survey work of 1714 hours would have baseline costs between $34,280 and $42,850. Total costs would range between $51,780 and $63,850.

SUMMARY

As a manager of public lands, the Lexington-Blue Grass Depot Activity has responsibilities for the management of the natural and cultural resources held on those lands, for the general benefit of the American people. This report is an assessment of the prehistoric and historic archeological resources retained on the facility, and a general set of recommendations for the future management of those resources.

No archeological investigations have been conducted on the Depot Activity and no sites are presently recorded; however, 135 potential historic resources have been documented on the facility. In order to more reliably characterize the facility's archeological resources, both for legal compliance and for general planning purposes, a reconnaissance survey of undisturbed lands is recommended. Further, to better evaluate and eventually rank research priorities for the potential resources, additional archival research is required. Oral history research should also be undertaken to better document the sites. After the above data are collected, each site should be reevaluated and ranked and a sample of significant and/or unique sites should be field-checked and protected from further disturbance.

Completion of a Historic Preservation Plan, in compliance with Army Regulation 420-40 and based on information available from this report and from the historic architectural study presently being conducted by the USDI Historic American Building Survey, could provide the basis for an affirmative cultural resource management program appropriate to a land-managing agency whose fundamental mission is support for America's military.

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APPENDIX A

RESOURCE LOCATIONAL DATA

APPENDIX B

AN ARCHAEOLOGICAL RECONNAISSANCE OF A PROPOSED ROCKET DEMILITARIZATION FACILITY AT THE LEXINGTON - BLUE GRASS ARMY DEPOT, MADISON COUNTY, KENTUCKY

AN ARCHAEOLOGICAL RECONNAISSANCE OF A PROPOSED ROCKET DEMILITARIZATION FACILITY AT THE LEXINGTON - BLUE GRASS ARMY DEPOT, MADISON COUNTY, KENTUCKY

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
P. O. BOX 59
LOUISVILLE, KENTUCKY 40201
TELEPHONE: (502) 582-5696

AUGUST 1983

ABSTRACT

A pedestrian archaeological reconnaissance was undertaken by personnel of the U.S. Army Corps of Engineers, Louisville District, on Wednesday, 27 July 1983 of a proposed construction site located near the headwaters of a small, seasonal tributary to Muddy Creek on the grounds of the Lexington - Blue Grass Army Depot near Richmond, (Madison County) Kentucky. Covering approximately 28.35 acres (11.47 hectares), the subject tract was examined by means of pedestrian traverses and shovel excavated "peepholes" to enhance limited surface visibility. These efforts, in combination with a literature/records check, failed to produce any evidence of either prehistoric or early (pre-1900) occupation or use. In view of these completely negative findings, no further cultural resources investigations are recommended for this tract.

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LIST OF FIGURES

AN ARCHAEOLOGICAL RECONNAISSANCE OF A PROPOSED ROCKET DEMILITARIZATION FACILITY AT THE LEXINGTON - BLUE GRASS ARMY DEPOT, MADISON COUNTY, KENTUCKY

I. INTRODUCTION

An archaeological reconnaissance of a proposed rocket demilitarization facility to be constructed at the Lexington-Bluegrass Army Depot in Madison County, (east central) Kentucky (Figure 1), was undertaken on Wednesday, 27 July 1983 by personnel of the U.S. Army Corps of Engineer, Louisville District. As proposed, this project will affect an area measuring approximately 650 feet (198.1 meters) east-west by 1,900 feet (579.1 meters) north-south and consisting of ca. 28.35 acres (11.47 hectares). Situated near the headwaters of a small unnamed seasonal tributary to Muddy Creek, this gently undulating parcel lies between the elevations of ca. 885 feet (269.8 meters) at its southern terminus to 935 feet (285.0 meters) MSL near its northern terminus. Specifically, the project area is located at or near the following Universal Transverse Mercator (UTM) coordinates (Zone 16): northeast corner - Easting 746240, Northing 4178230; southeast corner - Easting 746220, Northing 4177660; southwest corner - Easting 746000, Northing 4177680; and northwest corner - Easting 746040, Northing 4178250. Despite the examination of over 28 acres, it is anticipated that actual construction requirements will result in the disturbance of only 11 acres (4.45 hectares) or less at or near the tract's southern terminus.

Located in central eastern Madison County near Richmond, Kentucky, the project area is approximately 25 miles (40.2 kilometers) south-southeast of Lexington, 45 miles (72.4 kilometers) southeast of Frankfort, and 90 miles (144.8 kilometers) east-southeast of Louisville. Bounded on its northeastern and northern borders by the Kentucky River, the county is disected by a number of small creeks which typically drain away from the city of Richmond. The county may be traversed from north to south by Interstate Highway 75 and from east to west by various state highways. Rail service is provided by the Louisville and Nashville Railroad which maintains track oriented approximately parallel to and eastward of Interstate 75.

II. ENVIRONMENTAL OVERVIEW

Situated predominately in the Outer Blue Grass physiographic region (Figure 2), the topography of Madison County varies from mountainous to hilly to gently rolling. The largest expanses of comparatively flat land within the county are found north and northeast of Berea (McGrain and Currens 1978:52). Underlain by middle and upper Ordovician limestone and shale, the Blue Grass portion of the county is characterized by long narrow ridgetops and deep valleys with steep slopes (Newton, et al. 1973:99). Hardwood trees constituted the original forest cover prior to modern timbering and agricultural land use.

With a growing season averaging about 200 days, the climate of Madison County is normally temperate. Summers are generally warm and humid while winters are moderately cold. For the county at large, the average daily

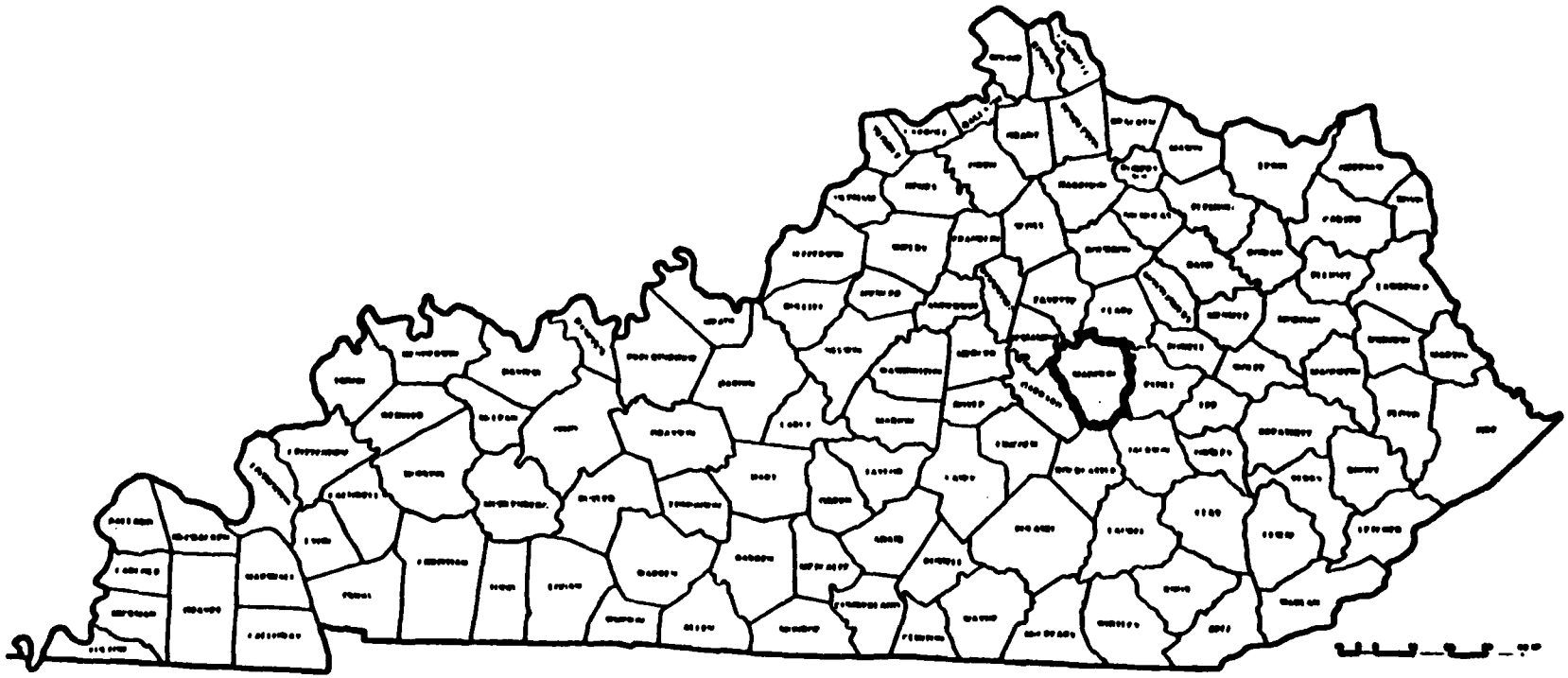

FIGURE I. Location of Madison County, Kentucky.
(Reproduced from McGrain and Currens 1978)

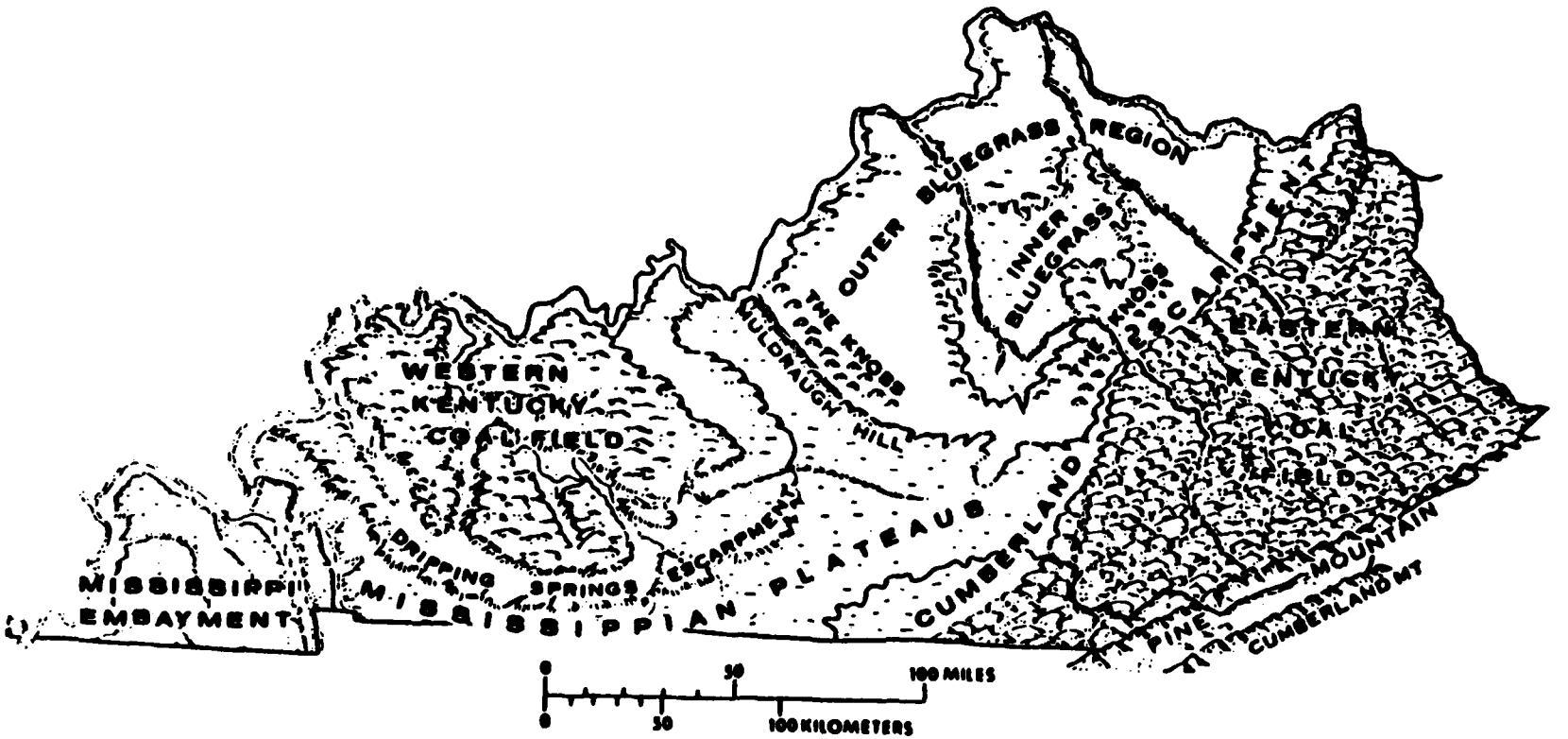

FIGURE 2. Physiographic Regions of Kentucky.
(Reproduced from McGrain and Currens 1978)

maximum temperature is 67 degrees Fahrenheit (19.4 degrees Celsius); the average daily minimum temperature is 46 degrees Fahrenheit (16.1 degrees Celsius). The average annual precipitation in the county as recorded during the period 1931-1960 is 48.0 inches (1.22 meters) (Newton, et al. 1973:99, 101).

III. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

In marked contrast to the degree of attention devoted to studies concerned with selected area (e.g., Ball 1978; DiBlasi and Sudhoff 1978; Robinson et al. 1979; Sorensen et al. 1980) and research problems (e.g., Collins, ed. 1979; Rolingson 1964; Rolingson and Schwartz 1966; Webb and Baby 1957; Webb and Snow 1974) within Kentucky, only sporadic professional attention has been directed toward the archaeological heritage of Madison County. As a consequence, the data for the following brief synthesis of archaeological developments within the reconnaissance area must necessarily be extracted from the available regional literature. At this time, five major periods have been defined in the reaches of the Middle Ohio/Kentucky River valleys: (1) Paleo-Indian; (2) Archaic; (3) Woodland; (4) Mississippian; and (5) Historic Euro-American (cf. Kellar 1973; Potter 1968; Swartz 1973; Tomak 1983).

Roughly dated from 12,000 to 8,000 B.C., the Paleo-Indian period (cf. MacDonald 1971; Mason 1962) is typically characterized by the presence of small numbers of certain distinctive fluted and unfluted projectile points styles such as Clovis, Cumberland, Quad, Meserve, and various Lanceolate forms (cf. Dorwin 1966; Prufer and Baby 1963; Rolingson 1964; Seeman and Prufer 1982). In her study of Paleo-Indian projectile points in Kentucky, Rolingson (1964:71) reported a total of 99 (35.87 percent) of the available sample of 276 such projectile points as occurring in the Bluegrass Physiographic Province, the locale of the reconnaissance tract and Madison County.

Generally divided for the sake of convenience into Early, Middle, and Late, the Archaic period dates from about 8,000 to 1,000 B.C. Typified by numerous sites ranging in size from little more than lithic scatters to large habitation areas, the known artifactural assemblages of this period reflect the broad spectrum of Archaic subsistence activities. Included among these items are a variety of serrated, beveled, barbed, and stemmed projectile points, drills, hide scrapers, hammer stones, and atlatl (spear thrower) weights (cf. Broyles 1971; Cambron and Hulse 1975; Coe 1964; Lewis and Lewis 1961).

The Woodland period, dating from about 1,000 B.C. to 900 A.D., witnessed the development of agriculture, the introduction of the bow and arrow, general usage of pottery, and the spread of mortuary ceremonialism culminating in the construction of earthen and stone mounds as the repository of the socially high-ranking dead (cf. Potter 1968:24-54). Horticulture was generally based on the domestication of plants indiginous to the eastern United States such as gourd, sunflowers, marsh elder, and canary grass, although some forms, such as

squash and corn, were ultimately derived from Meso-America (Struever and Vickery 1973). Occurring in a number of distinctive types, early ceramic forms primarily considered of simple jars with a concoidal base tempered with sand or crushed stone (typically limestone) and marked upon their exterior surface with cord or fabric impressions (cf. Clay 1963; Heimlich 1952). Perhaps one of the best known, if incompletely understood, Woodland manifestations within the region is the Adena "Culture" distributed through much of north-central Kentucky, southern Ohio, and some surrounding areas (cf. Webb and Baby 1957; Webb and Snow 1974).

Within the reaches of the Middle Ohio/Kentucky River valleys, the late prehistoric period, dating from about 900 A.D. to some time before Euro-American settlement, is demarcated by the Fort Ancient "Culture". Characterized by a sedentary village life, the economy was oriented toward the farming of corn, beans, and squash with supplemental food sources derived from hunting and gathering activities. Fort Ancient ceramics were shell-tempered and frequently decorated with incised or cord-marked exteriors although many utilitarian vessels were plain surfaced. Tools and ornaments were variously fashioned from flint (chert), river cobbles, antler, shell, cannel coal, and (rarely) copper. Although the Fort Ancient people did not construct ceremonially oriented temple mounds in common with their contemporaneous Mississippian peers such as the occupants of the Angel Site in Southwestern Indiana (Black 1967), the Tolu Site in Crittenden County, Kentucky (Webb and Funkhauser 1931), or the Kincaid Site in southern Illinois (Cole et al. 1951), occasional burials in stone-lined graves with pottery or bead mortuary furniture have been reported (cf. Griffin 1966).

Madison County was formed in 1785 and named in honor of President James Madison. Various notable citizens of Madison County have included Daniel Boone, Nathaniel Hart, Captain Christopher Irvine, Colonel William Irvin, Colonel John Speed Smith (Collins 1847:416-424), and Casius Marcellus Clay. The principal towns within the county are Richmond (countyseat), Boonesborough, Kingston, and Berea. In addition to its agriculturally based economy, Madison County is also host to Eastern Kentucky University (Richmond), Berea College (Berea), and several industrial plants (Newton et al. 1973:99).

IV. PREVIOUS AREA ARCHAEOLOGICAL RESEARCH

As previously noted, archaeological research in Madison County has been of a limited nature (cf. Boisvert 1982:98-99; Bowman 1973; Hilgeman 1983:34-35). In their pioneering study of Kentucky archaeology, Webb and Funkhouser (1932:259-263) reported a total of 25 prehistoric sites within the county. Of this number, 21 (84.0 percent) were mounds (either single or groups), 2 (8.0 percent) were earthworks, 1 (4.0 percent) was a rockshelter, and 1 (4.0 percent) was a cemetery. As recorded in that study:

> Archaeologically, Madison County lies in one of the best of the mound areas in the state. There were literally hundreds of mounds within its borders in comparatively recent years but most of them have now been obliterated by cultivation and only those remain which were too high to plow over. Some of these, however, are well preserved and are of considerable importance while some of the largest have never been disturbed and are well worthy of archaeological investigation. At least one rather famous fortification is found in the county while graves, both isolated and grouped in burial fields, are not uncommon (ibid.:259).

Although sporadic reports have appeared since the 1920s describing various aspects of Madison County's archaeological heritage (e.g., Burroughs 1924; 1926; 1927; Moore 1982; Rowlette 1962; Wagers 1972), the majority of the reconnaissance and testing efforts undertaken to date have come about as a consequence of Federal compliance actions. While certain of these studies have produced only negative site locational information (Barber 1978a; 1978b; Gatus 1979; Schock 1974; 1975), others have been more productive. Near Richmond, Allen and Cowan (1975) located and tested 6 sites (15MA31-15MA37). One additional site (15MA38) in Richmond was subsequently reported by Claggett (1978) and various area cultural resources were assessed by Gibson, et al. (1980). In conjunction with the development of a housing subdivision in Berea, McGraw (1981) reported on a total of four sites (15MA60-15MA63), one of which (15MA60) was tested. Additional reconnaissance level studies by Schock and Alvey (1981) and Railey (1982) resulted in the location of 21 sites (15MA48A, 15MA48B, 15MA49, 15MA50A, 15MA50B, 15MA50C, 15MA51-15MA65, and 15MA72-15MA78).

A review of the National Register of Historic Places as published in the Federal Register (Department of the Interior 1979; 1980; 1981; 1982; 1983; see also supplements published through and including 23 August 1983) indicated that the following 22 sites, properties, or structures within Madison County have been determined to be of local, regional, or national significance:

Berea

1. Lincoln Hall, Berea College;
2. Louisville and Nashville Railroad Passenger Depot, Broadway at Adams Street;

Big Hill vicinity

3. Merritt Jones Tavern (Grant House/Wayside Tavern), one mile south of Big Hill on U.S. 421;
4. Indian Fort Mountain (location not given);

Bybee

5. Cornelison Pottery, KY 42;

College Hill vicinity

6. Cave Spring Primitive Baptist Church, north of College Hill;

Kirksville vicinity

7. Nathan Hawkins House (early stone building), Curtis Road;

Little Hickman

8. Stephen Murphy House (early stone building), off KY 39;

Moberly vicinity

9. John Moberly House (early stone building);

Richmond

10. Judge Daniel Breck House, 312 Lancaster Avenue;
11. Downtown Richmond Historic District, Main Street and Courthouse Square;
12. Irvinton, 319 Lancaster Avenue;
13. Madison County Courthouse, Main Street between North 1st Street and North 2nd Street;
14. Old Central University (University Building), University Drive on Eastern Kentucky University Campus;
15. Holloway House (location not given);

Richmond vicinity

16. Bogie House and Mill, 8 miles west of Richmond on Silver Creek;
17. Whitehall (Casius Marcellus Clay House), 7 miles north of Richmond on Clay Lane off U.S. 25;
18. Duncannon, south of Richmond on John Parrish Lane;
19. Noland Mound (Archaeological Site 15MA14; location not given);
20. Issac Newland House (early stone building), off U.S. 25;

Round Hill

21. Archaeological Site 15MA24 (location not given); and

Ruthton vicinity

22. Bogle Circle (location not given).

None of these properties will be in any way adversely impacted by the construction or operation of the proposed facility. Likewise, coordination with the Kentucky Heritage Council (personal communication, Mr. Thomas Sanders, Frankfort, Kentucky, 28 July 1983) and the Office of State Archaeology (personal communication, Lexington, Kentucky, 29 July 1983) has indicated that neither of these offices have on file any information regarding previously recorded prehistoric or historic sites within the proposed project area.

V. RECONNAISSANCE METHODS AND FINDINGS

The subject reconnaissance area, consisting of approximately 28.35 acres (11.47 hectares) situated within the boundaries of the Lexington - Blue Grass Army Depot in Madison County, Kentucky (Figure 3), was examined by means of pedestrian reconnaissance on Wednesday, 27 July 1983. Specific locational data referable to this proposed project area has been presented in Section I. Surface visibility over the majority of the tract was, at best, no better than one (1) or two (2) percent. The best visibility conditions encountered during the reconnaissance were restricted to a relatively small area measuring ca. 150 feet (45.7 meters) by 150 feet (45.7 meters) immediately north of a small wildlife pond in the parcel's northwest sector; this area alone exhibited surface visibility of 75 to 100 percent as a consequence of recent (within the past year?) earth moving activities.

A visual inspection of sporadically occurring patches of bare earth, erosional gullies, and animal burrows supplemented by shovel excavated "peepholes" spaced approximately 40 to 50 feet (12.2 to 15.2 meters) apart was undertaken in the course of two north-south (long axis) and three east-west (short axis) traverses across the tract. When appropriate, a reasonable amount of sidestepping was done to better examine localized areas which afforded enhanced visibility conditions. The conduct of the field reconnaissance effort as described produced no evidence of either prehistoric or early (pre-1900) historic archaeological materials. Likewise, no standing structures or remnants thereof were observed.

VI. CONCLUSIONS AND RECOMMENDATIONS

A literature/records check and pedestrian reconnaissance consisting of a visual examination of limited expanses of exposed earth supplemented by shovel excavated "peeholes" on the site of a proposed facility to be constructed on the grounds of the Lexington - Blue Grass Army Depot has failed to produce any evidence of either prehistoric or early (pre-1900) historic cultural resources. In light of these completely negative findings, no additional cultural resources investigations are recommended for this parcel of land.

ACKNOWLEDGEMENTS

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FIGURE 3. Location of Proposed Project Area
Madison County, Kentucky.

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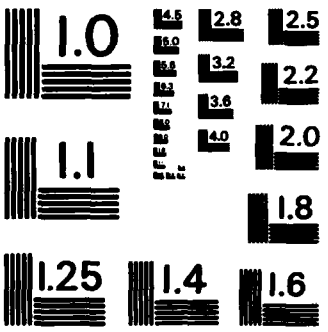

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